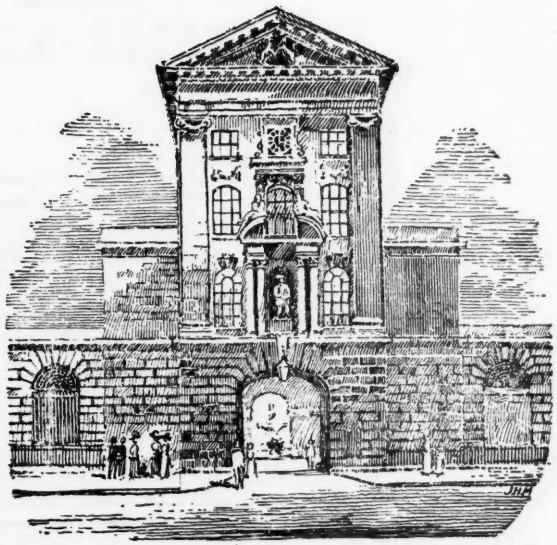
St. BARTHOLOMEW'S HOSPITAL JOURNAL



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"Æquam memento rebus in arduis
Servare mentem."
—*Horace*, Book ii, Ode iii.

VOL. XXXIX. – No. 1.] OCTOBER 1ST, 1931. PRICE NINEPENCE.

CALENDAR.

Fri., Oct. 2.—Sir Percival Hartley and Mr. L. Bathe Rawling on duty.
Sat., ,, 3.—Rugby Match *v.* Bath. Away.
Association Match *v.* St. Thomas's Hospital. Away.
Mon., ,, 5.—Special Subject: Clinical Lecture by Mr. Just.
Tues., ,, 6.—Sir Thomas Horder and Sir C. Gordon-Watson on duty.
Wed., ,, 7.—Surgery: Clinical Lecture by Mr. L. Bathe Rawling.
Rugby Match *v.* London Hospital. Away.
Fri., ,, 9.—Dr. C. M. Hinds Howell and Mr. Harold Wilson on duty.
Medicine: Clinical Lecture by Dr. Hinds Howell.
Sat., ,, 10.—Rugby Match *v.* Otley. Home.
Association Match *v.* Brighton Old Grammarians. Away.
Hockey Match *v.* Beckenham 2nd. Home.
Mon., ,, 12.—Special Subject: Clinical Lecture by Mr. Bedford Russell.
Tues., ,, 13.—Dr. Gow and Mr. W. Girling Ball on duty.
Wed., ,, 14.—Surgery: Clinical Lecture by Mr. L. Bathe Rawling.
Fri., ,, 16.—Prof. Fraser and Prof. Gask on duty.
Medicine: Clinical Lecture by Sir Thomas Horder.
Sat., ,, 17.—Rugby Match *v.* Bedford. Away.
Association Match *v.* Old Brentwoods. Home.
Hockey Match *v.* Woolwich Garrison. Away.
Mon., ,, 19.—Special Subject: Clinical Lecture by Mr. Elmslie.
Last day for receiving matter for the November issue of the Journal.
Tues., ,, 20.—Sir Percival Hartley and Mr. L. Bathe Rawling on duty.
Wed., ,, 21.—Surgery: Clinical Lecture by Mr. Harold Wilson.
Rugby Match *v.* Cambridge University. Home.
Fri., ,, 23.—Sir Thomas Horder and Sir C. Gordon-Watson on duty.
Medicine: Clinical Lecture by Sir Percival Hartley.
Sat., ,, 24.—Rugby Match *v.* Coventry. Home.
Association Match *v.* University College, London. Away.
Hockey Match *v.* Sittingbourne. Away.
Mon., ,, 26.—Special Subject: Clinical Lecture by Mr. Bedford Russell.
Tues., ,, 27.—Dr. C. M. Hinds Howell and Mr. Harold Wilson on duty.
Wed., ,, 28.—Surgery: Clinical Lecture by Mr. W. Girling Ball.
Fri., ,, 30.—Dr. Gow and Mr. W. Girling Ball on duty.
Medicine: Clinical Lecture by Sir Thomas Horder.
Sat., ,, 31.—Rugby Match *v.* Moseley. Away.
Association Match *v.* Keble College, Oxford. Away.
Hockey Match *v.* R.N. & R.M., Chatham. Home.

EDITORIAL.

OCTOBER.

THE first freshman will soon have taken his seat at the Senior Staff table, and all the annual freshman's stories will have enjoyed their annual success. Let him be assured, nevertheless, of the heartiness of our welcome.

* * *

Those who see St. Bartholomew's now for the first time see an institution, out of the wisdom of its eight hundred years, changing with the times. Buildings, equipment, the whole machinery of the treatment of patients, have undergone an extensive overhauling unequalled in history. The new Surgical Block stands in the first flush of novelty, reminding physicians how far off are the days when surgeons were appointed to do *their* bidding. The out-patient department grows as specialized as modern medicine: diabetic, rheumatic, fracture, varicose-vein clinics are to be followed by one devoted to neurology. The Midwifery Department announces that district cases in Finsbury are to be provided with midwives free of charge, while the probings of the *Lancet* Commission into the affairs of nursing staffs are not to be without effect here. Meanwhile such revolutionary projects as an evening visiting hour and out-patient visits by appointment are the subject of experiment elsewhere. And all these changes while the income of the voluntary hospitals is being jeopardized by the nationalization of philanthropy.

* * *

A new era dawns, too, for the recruiting of students. Accompanying a request for admission to the Medical School is sent a document, after these lines, from a committee on recommendations to medical colleges:

> "The statement below is an estimate of this candidate based upon the opinions of his science instructors. . . ."

The estimate divides him into "Presence or Personality," "Character," and "Scientific Aptitude," with a "Scholarship Rating" expressed as a percentage for summary. Under the three main heads he may be excellent, average, or below average, and for further information "Specific Qualities" are marked by underlining the applicable adjectives in the following printed list:

PRESENCE OR PERSONALITY.

Manners: Congenial, well-bred, polite, deferential, crude, boisterous, aggressive, assured, reserved, gentle, shy, argumentative, talkative, soft-spoken, quiet, fastidious, supercilious, awkward, has poise, tact, dignity, a good speaker.

Temperament: Vivacious, colourless, nervous, stolid, enthusiastic, *blasé*, cheerful, sullen, serious, alert, dreamy, whimsical, popular, able to lead others.

Person: Tall, medium, short, stout, thin, well-built, erect bearing, sturdy, weak physically, good looking, ugly, neat, sloppy.

CHARACTER.

Honest, conscientious, reliable, considerate, tractable, generous, modest, energetic, self-controlled, ambitious, mature, social-minded, deceitful, erratic, self-centred, stubborn, frivolous, conceited, lazy, impulsive, immature, narrow-minded.

SCIENTIFIC APTITUDE.

Original, versatile, independent, accurate, thorough, careful, logical, responsive, resourceful, clear, level-headed, quick, concise, shrewd, keen, deft, good technique, interested in research, a "book" student, slow, unimaginative, muddled, careless, poor technique.

This list of possibles seemed to merit publication. Of such stuff are doctors made!

* * *

The following letter, received by a House Physician from a boy of seven years, suggests a new source of income for the Hospital (as well as a new use for H. P.'s).

"DEAR SIR,—When I came to Bart.'s on Monday I noted your free camera scheme. If you will send full instructions please, I shall be very glad. As regards french could you send me a letter to say I can't do my french homework, as it is a great source of worry, I shall be much obliged. I remain, yours truly, M. F—."

* * *

ABERNETHIAN SOCIETY.

Dr. W. Langdon Brown will deliver the Inaugural Address before the Abernethian Society on Tuesday, November 3rd, at 8.30 p.m., in the Medical and Surgical Theatre. His subject will be "Dr. Robert Bridges, the Poet of Evolution." All members of the Students' Union become automatically members of this Society, whose programme for the academic year is published on another page.

* * *

N. B. COHEN.

We announce with regret the death of Nigel Cohen, first-year student of this Hospital, in a flying accident on Friday, September 18th. Sir Herbert Cohen is well known as an Almoner of the Hospital, and the sympathy of all will be extended to him and to Lady Cohen on the tragic loss of their elder son. An obituary notice is published below.

OBITUARY.

NIGEL BENJAMIN COHEN.

IT was on Friday, September 18th, 1931, that N. B. Cohen, at the age of 23, was killed through a flying accident. The disaster was the more poignant, for we suddenly came upon the announcement in the morning newspaper, and it took from Sir Herbert B. Cohen, Bart., a member of our College Council, his son and heir. We feel the deepest sympathy for Sir Herbert and Lady Cohen.

Cohen came to us from Cambridge to continue his studies in anatomy and physiology here. He was a most assiduous student, and soon became well known to his teachers, for his string of questions would often delay their lunch and take them beyond the scope of their immediate discourse. The more elderly members of the Staff, who will always regard flying as difficult and dangerous, were impressed by his aeronautical keenness. Cohen was an enthusiastic airman, and the first student, I imagine, to fly from the class-rooms of one University to those of another. He used to speak of the exhilaration of flying, the opportunities it gave for using the resources of more than one University, and the humanizing influence a student-pilot might exert over an obdurate examiner by taking him up in the air.

His interest in flying was, however, something more than the delight of a speedy novelty. For I think he was possessed of a powerful scientific curiosity. It was apparent in his medical studies. He spent long hours in "the rooms," and was always turning over in his mind the applications of anatomy and physiology to flying. This had led him to ponder already the problems that emerge when an organism adapted for terrestrial progression seeks to meet the demands made upon it by hitherto undreamt-of speeds in the air. It is not improbable that sooner or later, and it may have been sooner, his deep interest in these matters would have led him to trespass on that narrow margin of safety which is all that belongs to the pilot.

The driving force of his brief life was a love of science. This noble passion caused him to live dangerously and to die early, and it led him to express the wish that, after his death, his body might serve the needs of scientific instruction and research. H. H. W.

ON BEING BEREFT OF SPEECH.

By a Patient.

OUR medicine is too objective; a doctor who has himself suffered from a complaint is by so much the more knowledgeable in dealing with that disease in others. Readers of this journal may be interested, therefore, in a short account of the experiences of a patient from a purely subjective point of view.

Being myself a doctor, things naturally meant more to me than to a layman, and I cannot help this fact sticking out now and then, but I will strive to be as pure a patient as I can. I must, however, first state the nature of my disease. It was a " cerebral accident " involving the cortex of Broca's convolution on the left side, but I must leave the doctors to settle whether it was due to embolism, thrombosis or sub-arachnoid hæmorrhage—all of which opinions were expressed. The effect was complete paralysis of pharynx, right half of tongue and face, interference with the movements of the right vocal cord and also impairment of the finer movements of the right thumb and index finger, which made writing clumsy and laborious for a long time. For the first few days there was numbness of the right arm and hand, which soon passed off everywhere except in the ring finger. I am told that the above combination of symptoms is characteristic of block of the anterior branch of the left middle cerebral artery. The lesion, devastating as it was to me, was only an incident in an illness associated with broncho-pneumonia, lasting nearly three weeks, for which I was being treated by the kindness of Dr. T. M. Rivers in the Hospital of the Rockefeller Institute in New York. It occurred on the tenth day of the illness, and in describing my experiences I will confine myself to the aphasia and the associated motor symptoms.

The onset can be timed very closely. At a given moment I was talking naturally to the nurses. Five minutes later an orderly thought I was speaking queerly and was clumsy with one hand. Five minutes later still, aphasia was complete. Dr. Rivers came in waving a cable from a member of my family, with which he expected me to be pleased. But I gazed upon it with lack-lustre eye, and he then held it out to me. I missed it with my right hand and then similarly missed my spectacles. He then asked me if I understood the cable and I nodded. He noticed that my face was on one side, and I saw an expression of alarm come over him. He ran off for his colleagues, who soon gathered round me and made fuller examination.

I can affirm positively that I had not the slightest subjective sensation in my head at the time the incident occurred, or before or after. I may have felt a little dull and stupid, but I quite appreciated the situation. My notions of hemiplegia and aphasia were, however, somewhat archaic, and mostly derived from the P.M. room, so that my first thoughts were " It's me for the New Jerusalem this trip, and what a rotten way to go out, away from home like this ! " My first ray of comfort came from hearing Dr. Rufus Cole say, " Oh well, it must be a very small one because the neighbouring centres are all right," so I then began to think I might not die immediately, but live for a time as a useless burden on people, communicating by signs, for the idea of recovering effective speech was still far from my thoughts.

A few days after my seizure, Dr. Tilney, the head of the Neurological Department of Columbia University, was called in in consultation. I could now write feebly, and I asked him the prognosis as regards speech. I had been rather dreading his answer, but to my amazement he said I should speak as well as ever and fairly soon too. I shook hands with him, and I am not ashamed to confess to a tear or two of joy and thankfulness.

My first reaction was almost grotesque. I at once abandoned all thought of growing a beard, and summoned an orderly to come and shave me as a symbol of my new hopes.

I was now confronted with the problem of a man, in full possession of his faculties, but cut off from his fellows by a barrier which it seemed hopeless to pass. True, I could nod my head or shake it or point to anything I wanted, but I found people very slow in the uptake. It was a pure motor aphasia. I had all the words ready, but the machinery for uttering them was gone and I could not make a sound. However, I could manage to write feebly and incredibly badly, at first better with my left hand. I once knowingly tried mirror-writing with the left hand, but it was no improvement. In two or three days I could write equally well with the right hand and this slowly improved with practice—though I found it very tiring for a long while.

Suddenly there occurred to me the idea of a box of letters which I could arrange on a board. It so happened that this was at a moment when a niece of mine was spending a week-end in New York, and she kindly made for me what proved to be better than detached letters, namely an alphabet with thick letters an inch high, well spaced on a card, twelve inches by ten. This was easily and quickly handled, and proved a priceless engine of communication with the outside world. Indeed, I am told that the first use I made of the card was to spell out " Communications re-established."

My forefinger became so nimble with use that others found it difficult to keep up with me; moreover, I developed a certain mental agility in deciding in how small a number of letters I could express a given idea. With this alphabet I found it possible to be laboriously chatty and even waggish, and for two or three weeks, as speech gradually returned, I used little else.

The man whose pharynx is paralysed has disabilities other than that of speechlessness. He cannot suck through a tube and has to be fed by spoon. The nurse duly places between his lips a spoonful of milk or soup but the Lord alone knows where it goes. With luck much of it doubtless reaches its destination, but much may splash around in the flaccid pharynx, perhaps to be rejected with vehemence a little later, and I remember the desiccated remains of yesterday's egg-nogg being once cleaned off the back of my pharynx with a spatula.

About three weeks from the first onset of my illness my temperature became normal and my physical recovery was now uninterrupted. The return of speech, which began in about a week from the onset of the aphasia, was really a process of thrilling interest, and left on my mind no shadow of doubt that it was one of the rehabilitation of the old cortical centres as a collateral circulation was established. How else could one explain the fact that I regained the power of counting the numerals up to 10 simultaneously in English, French, and German?

The return of speech was in a sense independent of my own volition. I did not have to learn *de novo*, but rather resumed the power as fast as the palsied muscles enabled me to exercise it. That of course is a crude way of putting it; a truer way would be to say "as fast as the recovering cortical nerve-cells became able to stir the still intact lower motor sectors into action." Doctors would come and stand over me trying to teach me to speak, urging me to put my mouth into such and such a position. This was uniformly futile. What actually happened was that each day, when I woke, I was able to say more and more, the power having miraculously descended upon me from on High during the night. Thus every morning the nurses used to gather round my bed to hear what new parlour tricks I had acquired.

In my diary I entered the progress I made. The larynx recovered first, enabling me to try vowel sounds. For the first week or so I was totally silent; then I became able to make miscellaneous farm-yard noises and then a low "Ah," followed soon by more high-pitched notes, and during the second week from onset progress was very rapid, as the lips and cheek began to regain power. I could soon repeat the alphabet and count the numerals. By the way, I found German and French words to slide out of the mouth more easily than English. English is certainly a very difficult language for foreigners to speak.

Exactly a fortnight after the onset of my aphasia I found myself one morning able to utter the untrue and irrelevant remark, "I have no need," and this was regarded as a great achievement. A day or two later I was able to repeat what in my own esteem was the first verse of "Mary had a little lamb." Early in the morning, when I was fresh, my auditors agreed that it was this poem, but in the afternoon, when I was tired, there was a good deal of doubt about it.

Somehow poetry came easier than prose, and sentences I knew well easier than extemporaneous remarks. Singing came most readily of all, so that in three weeks from onset I could sing the Doxology with power and conviction. When Dr. Tilney came again to see how I was getting on and told me I had improved even faster than he had expected, he was astonished, as he left the room, to hear me break forth loudly with "Praise God, from whom all blessings flow," but he quite saw the point.

Up to this time my progress in speaking had been rapid. It continued, but now at a slower pace. As a matter of fact a conversation of any length must have been as boring to the auditor as it was fatiguing to me, for much that I endeavoured to say was unintelligible, and I often had to spell aloud the word which had proved too much for me. With one cheek still paralysed it was difficult to get one's mouth into the right shape, and I found, too, that false teeth were a mixed blessing. It was hard enough to learn to articulate anew, but to do so with your mouth full of dominoes aggravated the hardship. However, I persevered, and was assured by all that progress was real. Before I left the hospital, rather more than seven weeks after the onset of the aphasia, I could say almost any word if you gave me time, but I had to dissect the difficult ones into syllables, so that speech was slow, staccato, and monotonous. I remember that the word "bacteriology" presented peculiar difficulties.

The presence of complete facial paralysis—and this persisted till after I had got back to England—was a great vexation in eating, for, when I came to sit up and feed myself, the previous mouthful tended to fall out when I opened my mouth for the next. The first time I sat up to lunch I used up three table napkins, and on board the boat, coming home, I had to eat in private owing to my deplorable table manners.

My time in hospital was not rendered the more exhilarating by the heat-wave which afflicted New York during June and July, the temperature remaining usually in the eighties (once 93°), with pretty complete aqueous saturation. However, if you slept immediately

under an open window, with only a sheet over you, and kicked off your pyjamas while the night nurse wasn't looking, you sometimes left off sweating just before dawn. This was the reason why I was allowed to come home at the earliest safe moment, to convalesce under cooler skies. But first I had to learn to walk. After seven weeks of absolute bed my back and legs were useless, owing to atrophy from disuse. But ten days' vigorous massage improved matters, and whereas I couldn't offer at standing alone when I first tried, five days later I walked 20 steps without any support.

And so, nearly eight weeks after entering the hospital of the Rockefeller Institute, I was transported in an ambulance to the R.M.S. "Mauretania," full of thanks and gratitude for the skill and care with which I had been treated and the kindness with which I had been nursed.

On board the boat I learned to walk further each day, until finally my legs joined up with my back and I could walk alone. Once back in England my improvement continued, and even the facial palsy began to clear up under massage and Faradic electricity, much improving both speech and table manners. But here again let the patient drop a hint of what is unknown to many a doctor. If you are having the Faradic current to your face, shave afterwards and not before, or every tiny abrasion will burn like fire.

At the time of writing this article, just three months after the aphasia occurred, my speech still leaves much to be desired, but I can conduct an ordinary conversation without much difficulty, though still rather slowly.

F. W. A.

THE VOLUME OF THE BLOOD.

THE part played by the volume of the blood is very important, but it is apt to be forgotten. This is partly due to the difficulty of estimation which existed in the past, and partly to the absence of any adequate reference to it in the great majority of text-books of physiology and medicine. Two methods are used for estimating the blood volume of patients, but unfortunately their results do not agree. Haldane's carbon monoxide method is not suitable if the patient is very anæmic; moreover the technique is not easy. The mean value by this method is 66·6 c.c. per kilogram. This would give a blood volume for a man of 66 kgrm. (10 st. 5 lb.) of 4400 c.c., or $\frac{1}{15}$ part of the body-weight. Keith, Rowntree and Geraghtry in 1915 introduced a method which is much more suitable for clinical purposes, as it can be used even if the patients are seriously ill. A known volume of a dye solution like Congo red is injected into a vein, and allowed to circulate in the blood-stream for three to six minutes. Some blood is then withdrawn, and the degree of the dilution of the Congo red is then estimated by a colorimeter. The total volume can be calculated from these data. Rowntree and Brown examined ten normal persons by this method, and obtained a mean value of 88 c.c. per kgrm., while the extremes varied from 72 c.c. to 100 c.c. The mean value for the blood volume of a man weighing 66 kgrm. would be 5608 c.c., and the extremes 4750 c.c. to 6000 c.c. The mean value expressed as a fraction of the body-weight is nearly $\frac{1}{12}$, and the extremes $\frac{1}{14}$ to $\frac{1}{11}$. The difference between the two methods is, therefore, very considerable.

There is a third method which can only be used on animals. The percentage amount of hæmoglobin is estimated, and the whole of the blood is then washed out by means of saline, and the total hæmoglobin estimated. The blood-volume obtained by this method is $\frac{1}{13}$ of the body-weight, and agrees much more closely with the results obtained by the dye method. Since the latter method is so much safer in clinical medicine, the figures obtained by it have been used to illustrate this article.

The blood-volume in health is maintained at a practically constant level, under the usual conditions of work and play. Even if large quantities of fluid are imbibed it hardly alters. Thus Priestley drank 2000 c.c. of water ($3\frac{1}{2}$ pints) in as short a time as possible, and excreted 1200 c.c. in the first hour. In this period he thought that his blood volume might have increased by 30 c.c., an insignificant alteration.

Under pathological conditions the volume can be considerably decreased, either by loss of fluid from the blood, or by the actual loss of blood by hæmorrhage.

Loss of Fluid from the Blood.

This condition is seen in its most striking form in patients with cholera, although it may be present in a less severe form in patients with severe dysentery, in young children with diarrhœa and vomiting, cyclic vomiting, or vomiting due to obstruction somewhere in the gastro-intestinal tract. In cholera the amount of fluid which is lost from the bowel in a short time is very considerable, and the sunken appearance of the patient shows quite clearly that the body-fluids are seriously

§

depleted. The blood-volume is decreased, and the hæmoglobin percentage rises above 100% to 110%, or even higher. The specific gravity of the blood is always estimated in cholera patients, and may rise above the normal of 1056 to 1060 or 1065.

It is important to recognize the condition, and an estimation either of the hæmoglobin or of the specific gravity should be made as early as possible, and repeated in two or four hours' time. The mortality-rate in cholera has been very considerably reduced since it was recognized that the blood became concentrated. The fluid must be given intravenously in this condition. Leonard Rogers found that hypertonic saline 1·2% NaCl was of greater value than normal saline 0·9% NaCl. Sufficient fluid must be given to lower the specific gravity to below 1056 and the hæmoglobin below 100%, and it may be necessary to repeat the process several times in a severe case. The blood may become concentrated under conditions in which very little fluid has been lost. Thus it may occur in patients who are near the crisis of a pneumonia, in diabetic coma not associated with any polyuria, and in wound shock.

The diagnosis can only be made with certainty by watching the change in the hæmoglobin or in the specific gravity of the blood at intervals, whenever it is suspected that this condition is arising. The condition may be prevented by giving water or half normal saline by mouth. Normal saline should also be given *per rectum*, but in all severe conditions the saline must be given intravenously.

Loss of Blood by Hæmorrhage.

It is much more difficult to be certain of the decrease in the blood-volume when bleeding has occurred. It is difficult to say by looking at the blood on the bed or ground how much blood has been lost. If the patient has been removed to hospital the doctor is dependent on the statements of the patient or his friends, and the task is still more difficult. If the patient has vomited blood it is impossible to say how much blood still remains in the stomach and intestines, and therefore how much blood has been lost.

The changes which occur after a hæmorrhage can most easily be explained by considering the effect of the loss of 1000 c.c. of blood by a healthy patient, whose blood volume was 5000 c.c. and the hæmoglobin 100%, and the red cells 5,000,000 per c.mm. Immediately after the hæmorrhage the hæmoglobin and red cells will be unaltered, but during the next few hours will decrease, provided that the conditions are satisfactory. The decrease is due to the dilution of the blood with fluid, taken up from the body tissues. After twelve hours the hæmoglobin will probably have decreased to 90%, and in the course of the next twenty-four hours to 80%. If larger amounts of blood have been lost, say 2500 c.c., several days will elapse even under favourable conditions before the blood volume reaches its maximum dilution and the hæmoglobin percentage falls to 50%. An instance of this type was seen quite recently :

A young man, æt. 20, was admitted some twelve hours after a hæmatemesis, in which it was reported that one pint of blood (560 c.c.) had been vomited. The hæmoglobin very shortly after admission was only 70%, and unless the blood had been diluted very considerably in the twelve hours before admission, it is unlikely that the hæmoglobin was above 80% before the hæmatemesis occurred. No further hæmatemesis occurred, and his condition did not give rise to any anxiety. The amount of blood passed in the stools was not large, but the stools still gave a positive test for blood by the benzidine test on the tenth day. The amount of hæmoglobin fell steadily, and was only 40% on the sixth day. This figure shows that he had probably lost half the volume of the blood, and perhaps 2500 c.c., either at the initial hæmorrhage, or during the next few days.

The dilution of the blood only occurs when the conditions are favourable. If the patient is allowed to get cold, suffers from severe pain, and is unable to drink water for any reason, the blood volume will remain low and the hæmoglobin high. During the war it was a common experience for a man to arrive at the casualty clearing station some twelve to twenty-four hours after he had been wounded. Some of these patients were very ill, and suffering from "shock." The hæmoglobin was often 90% or even 100%, and at first sight suggested that very little blood had been lost. If the condition was very grave, the hæmoglobin might be over 100%, and in one case with an abdominal wound, the hæmoglobin increased to 120% under observation. The amount of hæmoglobin in the capillary circulation in this type of case is considerably greater than in the venous blood. The difference between them is some indication of the degree of shock.

The dilution of the blood does not always occur even under conditions which seem satisfactory; thus Robertson and Bock found that severely wounded soldiers might not have restored the blood volume two or more weeks after the last hæmorrhage. A similar case has been observed in this Hospital by Prof. Fraser. A man who suffered from hæmophilia was admitted because he had vomited blood. While in the ward he vomited 700 c.c. on the first day and 675 c.c. of blood on the

second day. On the third day the hæmoglobin was 84%, and on the fourth day it was 94%. His general condition was poor, and the amount of hæmoglobin seemed surprisingly high in the light of the amount of blood which he had lost while in the ward. On the fifth day he was given 8000 c.c. of fluid by the mouth, rectum and subcutaneous tissues, and by the morning of the sixth day the hæmoglobin had fallen to 61%, and by the evening to 54%. The improvement in the general condition, as soon as blood volume had been restored, was most striking.

The diagnosis of the condition is not easy. If the blood volume cannot be estimated by the dye method, indirect methods must be used. It is most important to make an estimation of the hæmoglobin as soon as possible after the hæmorrhage, so as to determine whether the patient was previously anæmic. If the hæmoglobin percentage is known, it is possible to say some hours later whether the patient is diluting his blood satisfactorily or not. If the patient was already so anæmic that the hæmoglobin was 40% or lower, a blood transfusion should certainly be given with very little delay. If the hæmoglobin is 90% or 100%, this alone should not give rise to the belief that the patient is fit for an operation, because he may actually have lost more than half the blood volume. The decision to perform a necessary operation must be guided by the clinical condition of the patient, and the pulse-rate, volume of pulse, blood-pressure, sweating and restlessness are all-important points. Thus a hæmoglobin of 100%, if accompanied by a rapid pulse-rate, poor volume and a low blood-pressure in a patient who is restless and clammy is a nearly certain indication that much blood has been lost, and a blood transfusion is a necessity before any operation, however trivial, is performed. A similar condition without loss of blood may, however, be seen in " shock " after a severe injury. If a patient with such clinical signs has lost blood, it is imperative to give a blood transfusion so as to prevent the patient dying, because the blood volume is too small to maintain the circulation. It must be recognized that the transfused blood may run out at once if the patient has an open artery at the base of a gastric ulcers But life is prolonged by having an additional 600 c.c. or 900 c.c. of blood in the circulation, and there is alway. the hope that the hæmorrhage may stop before this blood is lost. It may be necessary to repeat this procedure several times, and Mr. Dunhill and Mr. Keynes once successfully transfused a patient with a severe internal hæmorrhage four times in three days. Some observers think that it is wiser not to give blood under these conditions, because the slowing of the circulation due to lack of a sufficient blood volume may predispose to stop the hæmorrhage, and that the blood transfusion may start the hæmorrhage again by improving the circulation. Although it is possible that hæmorrhage may be started again by a blood transfusion, it seems to me to be wiser to give the blood, and so prevent, for a while at all events, the death of the patient from an insufficient volume of blood. The blood should be given very slowly in these cases.

If a patient has lost a great deal of blood, but is able to dilute his blood volume satisfactorily, the hæmoglobin will continue to decrease for some days. If the hæmoglobin decreases to 30% a blood transfusion should be given, partly because a further hæmorrhage would be very dangerous when the blood contains so little hæmoglobin, and partly because convalescence is believed to be shortened by the improvement in the general condition following the blood transfusion.

These cases show some of the difficulties which arise in the treatment of patients who have lost much blood. The most important point to remember is that the heart cannot maintain life unless the volume of the blood is adequate.

References.

Keynes, Geoffrey.—*Blood Transfusion.*

Robertson, O. H., and Block, A. V.—*Reports of the Medical Research Committee*, No. 6.

Rowntree, L. G., and Brown, G. E.—*The Volume of the Blood and Plasma.*

Wright, Samson.—*Applied Physiology.*

George Graham.

A COMPARISON OF THE ORAL AND INTRAVENOUS METHODS OF CHOLECYSTOGRAPHY.

THE literature on cholecystography is already of vast proportions, and statistics to demonstrate the accuracy of the various methods of administering the dye are also numerous. All writers on the intravenous method claim over 90% accuracy of diagnosis. The claims as to the accuracy of the oral method vary somewhat, but in a recent article Kirklin (1) gives some figures on the 35,000 cases done by the oral method at the Mayo Clinic, and claims a high degree of accuracy, namely 90% on all cases, and 98% when the diagnosis was positive. He also re-examined

by the intravenous method 250 cases, in most of which no shadow had resulted from the oral administration of the dye, and in only 1% did the results differ.

However, conditions vary in different parts of the world, and so it is as well to know the results obtained under our own working conditions in this Hospital.

An excellent report has already been made by Paterson Ross (2) for the intravenous method, and he has also given comparative statistics with the oral method (3), but there is some excuse for these additional figures, as the numbers considered are larger, and since his article great improvements in the quality of the dye and in the technique of administration have occurred, while in the last six months, following the installation of new apparatus, the radiographic technique has also greatly improved. The technique of the intravenous method has not altered since Ross's description of it (2). In the oral method the chief advance has been the substitution of liquid preparations drunk in grape- or orange-juice for capsules containing the liquid, and the replacement of the fatty meal just before the dye is taken by a fat-free one.

Four makes of dye were used for oral administration in this investigation, namely opacol, tetradol, T.I.P. (B.D.H.) and keraphen. They are probably all the same, and only differ in trade name. Supplies of tetradol are a little difficult to get, and so it is not much used now. Opacol and T.I.P. are English, and the cheapest, at 3*s*. a bottle. Keraphen at 4*s*. is the most expensive and is the latest American product.

The number of cases in which each was used is insufficient to justify a comparison between them, but they all gave good shadows in cases showing a normal gall-bladder.

The technique is the same for all of them, namely, no purgative, especially not castor oil, within 36 hours of the examination.

The usual food is taken until 5 p.m., when a fat-free meal is given. This should be of ample proportions, and selected from such articles as toast, jam, stewed fruit, steamed or boiled fish, potatoes, tea without milk, etc., but milk, butter and other fat-containing foods not allowed. At 6 p.m. the whole bottle of the dye is emptied into a wine-glass half full of orange-juice or grape-juice. (This can be obtained in bottles as Welches' grape-juice.) Unfortunately there is only one size of bottle of the dye, and the whole contents are given, which is the dose for an average adult. It is probable that somewhat larger doses are advisable for large patients.

After the dye has been taken, no further food or drink is given until ordered by the radiologist. Films are usually taken next day at 10 a.m. (16 hours) and 12 (18 hours after the dye was drunk). If a good shadow is present, a further film is taken one hour after a fatty meal of milk with a little cream in it, bread and butter, and a lightly boiled egg. If a faint shadow only was visible, the fatty meal may be postponed, and a further film taken at 20 hours, for fear of delayed absorption.

The radiological technique is varied a little according to circumstances, and the appearance on the first film. A lateral view will be of help in confirming that an opacity, seen through the dye in the anterior view, really does lie in the gall-bladder, and is better than stereoscopic films.

In this series of cases no serious reaction followed the administration of the dye by any of the methods used, and even in the oral method nausea was uncommon. The oral method is quite feasible for out-patients provided that the patient is sufficiently intelligent to carry out the instructions, and has easy means of access of the hospital, long journeys or much walking being contra-indications.

The following statistics are based on the X-ray appearances and not on the reports, although these usually agreed (actually 5 errors of diagnosis in 184 cases).

One point in diagnosis worth mentioning is that with the oral method excellent shadows were obtained in cases with a normal gall-bladder, although opaque dye cast a shadow from the colon. This shadow in the colon does not necessarily signify that no dye has been absorbed, and in the absence of a gall-bladder shadow it is safe to assume some absorption of the dye, in spite of opaque shadows in the colon.

It is probable that the intravenous method is the one of choice in very obese patients, and in patients with known gastric or duodenal lesions, as these may upset the result. No selection of cases on this basis was made in this series, nor was a larger dose of the oral dye given in large patients.

Analysis of Cholecystography: St. Bartholomew's Hospital, October, 1928 to October, 1931.

Only in-patients were followed up, and out-patients, unless admitted, are not included in these statistics. In 81 cases the appearances were normal, *i. e.* the gall-bladder cast a shadow only when filled with the dye, and this shadow became denser and slightly smaller on the second film two to four hours after the first. The shadow was homogeneous in density, and oval, pyriform or rounded in shape. It disappeared or almost disappeared following a fatty meal. Of the remaining cases 11 showed positive or negative shadows in the dye-filled gall-bladder, and 86 no filling, or very faint filling.

Results.

	Intravenous.	Oral.
Confirmed as normal at operation	17	11
Confirmed as pathological at operation	39	26
Normal, but no operative confirmation obtainable	36	17
Pathological, but no operative confirmation obtainable	15	17
Errors	2	4
Total	109	75
Percentage correct	98	94

Analysis of Errors.

All showed a normal gall-bladder and common duct at operation.

Intravenous: One gave no shadow; one poor shadow (gastric ulcer present).

Opacol: One poor shadow (gastric ulcer present).

Tetradol: Three gave no shadow.

I wish to thank the Senior Staff for permission to publish these figures on the cases seen in their wards.

REFERENCES.

(1) KIRKLIN, B. R.—*Amer. Journ. Roentgenol.*, May, 1931.

(2) ROSS, J. P.—*St. Bart.'s Hosp. Journ.*, December, 1929.

(3) *Idem.*—*St. Bart.'s Hosp. Repts.*, 1927.

G. SIMON.

RENAL COLIC: ITS NATURE AND RELIEF.

"Every pain has its distinct and pregnant signification if we will but carefully search for it." JOHN HILTON.

A VERY good opportunity of studying renal colic was recently afforded by the admission into this Hospital of the patient whose history is presently to be described. He suffered from bilateral renal pain, shown later to have been due to the presence of renal calculi; in addition, after the second operation he again experienced pain, due to some temporary obstruction. The nature of the pain and the measures employed for its relief both shed light on its causation.

Gershom L—, male, æt. 21, cabinet-maker, was admitted to Percivall Pott Ward on May 17th, 1931, under the care of the Surgical Professorial Unit, complaining of pain in both loins and blood in the urine.

History of present condition.—Two years ago: Intermittent attacks of lumbar pain on right side.

One year ago: Hæmaturia; attacks once a month.

Three months ago: Dull ache in left loin, worse on exercise.

The pain in each individual attack would commence as a dull ache, and then become persistently worse without even momentary remission; it usually lasted for several hours. The path of reference was to the front of the abdomen, in the line of the ureter, but not reaching as far as the testicle. The stream was good; no increased frequency, no retention, no dysuria, but marked constipation.

On Examination.—Healthy-looking young Hebrew, not in any pain.

Abdomen.—No rigidity, no tenderness, no tumour; kidneys impalpable.

Urine.—Albumen present in small amount; no blood or infection.

X-rays.—These showed bilateral calculi in the renal pelves.

Renal function proving satisfactory on investigation by the usual tests, operation for right pyelo-lithotomy was performed by Prof. Gask on May 29th. The patient made a good recovery, was discharged on June 16th, and went to a convalescent home for three weeks, during which time the pain returned on the left side as before. He was readmitted according to plan for the same operation on the opposite side (left). This operation was performed by Mr. Paterson Ross on August 7th, and the patient made an uneventful recovery until just ready for discharge, when suddenly on Sunday evening (August 24th) the pain returned on the right side (side of first operation). In the patient's words, the pain was like a knife sticking in his loin all the time; there was no remission whatever, and the pain soon became unbearable. It is to be particularly noted that the pain was of a persistent and progressive character, not of the kind usually associated with the word "colic." It commenced at the back as before, and passed down the line of the ureter as far as the testicle, which was tender to the touch and particularly painful on micturition. The pain was similar to that before operation, but much more severe, and was not relieved by two full doses of morphia; it commenced on the Sunday and persisted for four days, with intervals of comparative freedom, but these were intervals of hours—not momentary intervals of the kind to be expected in true colic. During these four days the patient vomited two to three times a day, the vomit consisting of recent food. There was extreme tenderness in the right loin. There was also troublesome constipation. X-rays showed no further stones.

On the afternoon of the fourth day (Wednesday) the pain became so intense that the patient was sweating profusely; accordingly, cystoscopy was undertaken by Mr. Paterson Ross. The right ureteric orifice was seen to be pouting and œdematous. A catheter was passed

up the ureter, and almost immediately pus was seen to issue around it. The patient experienced a numb feeling in the loin and he had no more pain; the tenderness in the loin also disappeared, and thirty minutes later he was sitting up in bed enjoying his tea! The ureteric catheter was left in place for twenty-four hours. At first a quantity of urine containing pus and blood escaped; later the flow diminished and the urine became normal. A week later the patient left the Hospital in perfect comfort on September 1st.

Discussion.

The special points of interest are (*a*) the nature of the pain and (*b*) the method of relief.

It was stated by Sir James Mackenzie that "the only stimulus which produces pain in the tissues which are supplied only by the autonomic nerves is the contraction of muscle," and now it is generally accepted that visceral pain has its origin in, and is due to an abnormal increase in tension of the muscle element of the wall of the viscus, caused either by (i) contraction of muscle, or (ii) failure to relax to accommodate increasing intravisceral pressure (1).

Now there are two types of pain corresponding to these two alternative causes: (i) the characteristic classical intermittent colicky pain, and (ii) the continuous progressive pain which was present in this case.

There are correspondingly two logical methods of relief:

(i) *Induction of relaxation of spasm.*—This can be accomplished by the orthodox atropine injection, or by the intravenous injection of 5% calcium chloride. This latter method is a most successful, if temporary, measure for the relief of any kind of colic; it can be repeated every twenty-four hours; its mode of action is not understood, its discovery having been rather a matter of chance. Bauer, Salter and Aub, believing that a close connection exists between the storage of lead and of calcium in the body, undertook a series of experiments in cases of lead colic in which they decided to observe the effect of the injection of calcium. They expected there would be a slow absorption of lead from the blood-stream into the bones. They were very surprised to find an immediate effect of outstanding nature. All pain was immediately abolished. The result being far too rapid to be accounted for by absorption of lead, the workers assumed it to be due to an anti-spasmodic effect of calcium; accordingly they administered it in cases of intestinal, biliary and renal colic and found it to be equally successful. The amount given was 20 c.c. of a 5% solution. It must be given slowly, as it produces an intense local burning pain and a generalized feeling of heat (2).

(ii) *Lowering the intravisceral pressure by removal of the contents.*—This is the method which was adopted in the case here recorded, and it was completely successful. J. C. Ainsworth Davis advocates this method, and quotes a case in which, on three successive occasions, he lowered the intrapelvic pressure, caused by calculus blockage, by passing a catheter up the ureter, thereby completely relieving the patient's pain (3).

A third interesting feature of this case was the association with the colic of persistent vomiting and obstinate constipation; this latter feature also occurred in Ainsworth Davis' case already quoted. He even suggests that this is caused by an associated intestinal obstruction, presumably due to inhibition of the neuro-muscular mechanism of the gut. There is obviously room for further investigation of these interesting symptoms.

In conclusion, I should like to thank Mr. Paterson Ross, not only for permission to publish this case, but also for his most helpful advice in the preparation of this article.

References.

(1) Ryle, J. A.—"The Clinical Study of Pain," *Brit. Med. J.*, 1928, i. 537.

(2) Bauer, Salter and Aub.—"The Use of Calcium Chloride to Relieve Peristaltic Pain," *Journ. Amer. Med. Assoc.*, 1931, xcvi. 1216.

(3) Davis, J. C. Ainsworth.—"Renal Calculus Associated with Solitary Cyst of the Left Kidney," *Brit. Med. J.*, 1930, i. 10.

H. Morgan Williams.

A UNIQUE CASE OF COMBINED PREGNANCY.

THE following case is reported partly because of its intrinsic interest, and partly because, as far as has been ascertained, no similar case has been previously recorded.

Mrs. E. C—, æt. 30, married four years, nullipara, came up to the Women's Out-Patients' Department, March 23rd, 1931, her sole complaint being dyspareunia.

She said she had always experienced great pain on attempted coitus, and that on this account actual penetration had never taken place. Her husband was later interviewed, and a careful consideration of the history he gave left no doubt as to the accuracy of his wife's statement.

History.—Her menstruation had always been normal and regular.

Last regular period.—December 31st, 1930, to January 3rd, 1931. She expected a period about January 31st, 1931, but she saw nothing till February 17th, when, while washing some clothes, she experienced a sudden attack of sharp pain in the right iliac fossa and hypogastrium. Almost at once she began to bleed *per vaginam*. The blood was at first dark and mixed with small clots, but after persisting steadily for about three days it became bright red in colour, while now she noticed the passage of shreds of flesh-like material. She called in her doctor, who said she had miscarried. The abdominal pain became less severe, giving place to soreness and tenderness of her hypogastrium, but she now experienced pain on micturition and on defæcation. Her symptoms steadily improved and by the beginning of March the pain had entirely disappeared, while the last trace of bleeding was on March 16th. Apart from these symptoms she had had morning and evening vomiting during the middle of February, and she had noticed enlargement and tenderness of her breasts.

She had given the matter no further consideration, and had come up to hospital, seeking treatment for vaginismus.

She was examined in Out-Patients by Dr. Wilfred Shaw, who found she was a healthy-looking though rather pale woman. Mucous membranes were a good colour. Temperature, 99°; pulse 80. Her breasts were active. Arising out of the pelvis to a height of 2 in. above the symphysis pubis and somewhat to the left of the mid-line was a firm, smooth, rounded and slightly mobile tumour.

Per vaginam.—The hymen was quite intact, the orifice barely admitting one finger. Extreme vaginismus was present, with no reason to account for it in the vulva or vagina, which were both quite healthy. The cervix was unusually soft, while the tumour felt *per hypogastrium* was identified as the body of the uterus symmetrically enlarged to the size of a 10 weeks' gestation. In the pouch of Douglas a soft, doughy, tender mass of indefinite outline could be palpated. The right tube appeared to be enlarged and the left appendages felt normal.

The history and physical signs were so characteristic of an ectopic gestation that she was admitted at once to Charity Ward, though in view of the intact hymen this diagnosis was thought to be extremely improbable, and a tentative one was made of chocolate cyst of the right ovary and fibroids.

Dr. Wilfred Shaw operated with a view to exploring the pelvis on March 25th, 1931:

On opening the abdomen the pouch of Douglas was found to be full of blood-clot. There was a right ectopic gestation with a peritubal hæmatocele, and the left tube and ovary were normal in every respect. The uterus was symmetrically enlarged to the size of a 10 weeks' gestation and was much softer than is usual in ectopic cases, while no fibroids were present. It is only rarely that anything more than a slight enlargement is encountered in association with an ectopic, though Gray states that the uterus may be as large as a 5 months' gravida. But invariably it is considerably smaller than it would be in an intra-uterine pregnancy. Because of this enlargement it was thought at the time of operation that there must be a coincident intra-uterine pregnancy. All blood-clot was cleared out of the pelvis, the right tube and ovary were removed, and the abdomen sewn up without drainage.

Apart from a slight "show" immediately after the operation she had no bleeding whatsoever and made an uninterrupted recovery.

She was seen by Dr. Shaw in June when she was undoubtedly pregnant, the uterus extending to 2 in. below the umbilicus.

She was last seen in the Ante-Natal Department, September 5th, 1921, when she was in perfect health, and will reach full term at the end of October. The specimen removed was examined carefully and the following points observed:

(*a*) There was a mole in the isthmus of the tube. On removal a dark, ragged, roughly circular area was revealed, which proved, on microscopic examination, to be an undoubted implantation site; the rest of the tube showed a marked decidual reaction. No chorionic villi were found, for as the ovum in all probability had died five weeks previously, all traces would have been absorbed.

(*b*) There was no obvious rupture of the tube, and the abdominal os was quite patent.

(*c*) Lastly, there was a corpus luteum of pregnancy in the ovary removed, but it was not determined at operation whether there was another in the ovary left in the body. There is no doubt, therefore, that this is a case of combined intra-uterine and extra-uterine pregnancies—a condition very uncommon in itself, but quite unique in association with an intact hymen.

DISCUSSION.

I. *Combined Pregnancies.*

A survey of the literature on the subject of combined pregnancies reveals much that is of interest.

In the majority of cases the gravid Fallopian tube ruptures, the shock and hæmorrhage causing the uterus to empty soon after. This by no means invariably happens. Fleurent's case did not abort until three months after abdominal section for the ruptured ectopic, and Mrs. E. C— shows every indication of giving birth to a full-time child in October, seven months after the operation, and eight months after the Fallopian tube ruptured. V. Neugebauer found that out of 181 cases, the uterine fœtus reached maturity in 34·6% of the cases and was born alive in 31·3%. Of the extra-uterine an astonishing number went to full term—20·4%—though of these only 5 were born alive through an abdominal section. Miller in 1908 actually removed a living child from an extra-uterine sac shortly after the birth *per vias naturales* of another. When studying the ætiology of this condition one must of necessity consider the predisposing causes of tubal gestations in general.

(1) The great majority appear to be caused by changes in the tube lumen, resulting from previous inflammations. Neighbouring plicæ partially denuded of their epithelium adhere to one another, forming tiny crypts, follicles and polypoid processes, which so impede the progress of the ovum that it becomes too large to complete its journey to the uterus.

(2) Congenital diverticula and accessory tubes seem to be the exciting factors in a small proportion of cases, whilst the congenitally hypoplastic tube, which is usually

long and tortuous and whose walls lack contractile power, is not uncommonly the site of an ectopic pregnancy.

(3) Lastly, it has been held that the ovum, after escaping from its follicle, migrates across the peritoneal cavity, in which it may be fertilized, to the tube of the opposite side, by which time it has become too large to reach the uterus.

In the case here recorded no pathological cause could be found. The tube removed at operation was examined microscopically, and no evidence was found of old or recent inflammation, or of congenital abnormality.

Parry advanced a very ingenious explanation for cases of this type. The entrance of a fertilized ovum into the uterus sets up a decidual reaction in both tubes. A second ovum, if set free, is unable to escape from the oviduct, while a sufficiently wide lumen is left for the entry of the sperm.

Needless to say the condition is very rarely diagnosed before operation. Although most cases, especially the earlier ones, are diagnosed as miscarriages, the possible occurrence of this rare condition should always be considered in a woman who has just miscarried, but who begins to show the signs of internal bleeding. By the time the two fœtuses are obvious clinically, the removal of the extra-uterine one has become a formidable task.

V. Neugebauer found the mortality was 30·6%, but with earlier diagnosis and improved technique this should be considerably reduced.

II. *Conception with Intact Hymen.*

The particularly interesting feature of this case is the fact that the patient conceived although actual penetration of the vagina had never occurred. Several cases of uterine pregnancy with an intact hymen have been published. Kuntzsch tells of a woman with vaginismus and a hymeneal cyst preventing coitus who conceived without defloration, while a similar case is reported in the *British Medical Journal* (1910, i, p. 1110). They demonstrate the extraordinary activity of the sperm. Considerable medico-legal importance is attached to these cases. In one of the most famous legal battles of this century this question of conception without penetration was brought into great prominence. And quite often in the Courts, when the reputation of a single woman is at stake, or perhaps when the credibility and character of a person making a charge of want of chastity against a woman is involved, it becomes necessary to decide whether or not this woman is a virgin. Most attention is given to the hymen. If it is found intact the question may arise, Is this positive proof of virginity? And the answer is No.

(*a*) The hymen may be soft and resilient with a large opening, and here penetration is possible without rupture.

(*b*) It may be resistant with a small orifice, so that penetration without defloration cannot occur, but nevertheless some of the fecundating fluid may enter the vagina.

The presence of the hymen may be taken as strongly presumptive evidence, but not absolute proof of virginity.

In conclusion, I wish to thank Dr. Wilfred Shaw for permission to publish the notes of this case and for much valuable criticism and help.

J. R. STRONG.

REFERENCES.

Brit. Journ. Obstet. and Gynæc., ix, pp. 492–501; x, p. 646; xiii, p. 52; xv, p. 126; xxi, p. 144; etc.

DR. MATTHEWS DUNCAN AT ST. BARTHOLOMEW'S HOSPITAL.*

I.

1877–1890.

LETTER FROM LORD LISTER TO DR. MATTHEWS DUNCAN.

MOST CONFIDENTIAL.

9, CHARLOTTE SQUARE, EDINBURGH.
18th Aug./77.

Mrs. Lister is my scribe and she is not a revealer of secrets.

(Retained by me because it was no secret to me when got—J.M.D.)

MY DEAR DUNCAN,—I dont know what you will say to what I am about to communicate. I have heard today on authority which is quite reliable that the Medical Staff of St. Bartholomew's Hospital would be unanimous in inviting you to occupy the position in that School which Dr. Greenhalgh is resigning, provided that they had reason to believe that you would be disposed to accept such an offer. I therefore write to you to ask you confidentially what you would think of such a proposal. Of course you are well aware that St. Bartholomew's is the largest of the London Medical Schools (a very different affair from poor King's). You will take into consideration the honour of such a most exceptional invitation & the noble work that there may be to be done by an honest man in setting an example of what high-principled gynæcological practice should be, & you will also estimate at its proper value the great probability of a first class and lucrative practice, together with the opportunity of devoting yourself exclusively to that department which you prefer.

Of course you will weigh the other side of the question, your position as the recognized head of your department in Scotland, your excellent practice carried on with little toil compared with that

* Being the last two chapters of the Wix Prize Essay, 1931.

of a London life, & the associations of friendship and relationship in your native country, and also what you so lately put before me the question of the expediency of making so great a change at your time of life. All I can say is that, as a Londoner, I shall be truly glad to see you in the Metropolis, if your best judgment leads you thither.

I must beg of you to burn this letter when you have read it; because it is only on the condition that this would be done that I have been permitted to make this communication to you, so as to take the place of the oral informant who would have interviewed you had you been in Edinburgh. With the sincere wish that you may come to the right conclusion I remain

ever most truly yours,
JOSEPH LISTER.

"Permanence of residence, good undoubtedly for the pocket, is not always best for wide mental vision in the physician," says Osler, and, "if the licence to practise meant the completion of his education, how sad it would be for the young practitioner, how distressing for his patients." Duncan was, however, neither a young nor an inexperienced practitioner when in 1877 the Staff of St. Bartholomew's Hospital, after a meeting at the house of Sir William Savory, invited him to become Obstetrical Physican to the Hospital on the retirement of Dr. Greenhalgh. But his mind was ever open and ready to seize chances which would profit, not only the education of others, but of himself. "It goes without saying that no man can teach successfully who is not at the same time, a student" (Osler). Duncan was a student of all that in his day remained among the great mysteries of life.

Duncan was a born instructor and some of his greatest pleasure lay in teaching. He used to say that "a man may do infinitely more good to the public by teaching his art than by practising it," and Sir William Turner says of Duncan, "To be daily brought into close contact with young and enquiring minds eager in the pursuit of knowledge was to him a source of great pleasure." London offered those chances of teaching which his mind yearned to exercise.

Naturally at first there was some hesitation in accepting the offer; his position, his practice, and his income was already of the best, so why should he change? However, he went up to London to see over the Hospital and interview the Treasurer, Sir Sydney Waterlow. His glimpses of her grey walls and the atmosphere which surrounded her precincts soon captured Duncan's heart and the decision to leave Edinburgh was made. He felt "that there was to be found everything he most desired in the world," and on his return to Edinburgh he met his wife and explained, "We go to London on the 1st of October."

Before leaving the city which had nursed but which had disappointed him, a public dinner was given to Duncan by a large number of his friends. Dr. Keiller, President of the Royal College of Physicians, occupied the chair, and Sir Douglas Maclagan proposed the health of the guest of the evening. His concluding remarks are worthy of repetition: "The profession would miss him whom they were accustomed to look to for advice in critical emergencies—the medical school would miss one who had done so much to uphold its reputation by his writings and teachings—they would miss him in the College of Physicians, whether in full College or in Council, where he always took a sage, prudent and vital part in their deliberations—they would miss him in their social meetings—and some of them would miss him in another capacity, that of the kind and hospitable entertainer." A description of Duncan by Mr. Benjamin Bell, given at this dinner, shows many aspects of Duncan which are not otherwise recorded. He says: "Allow me to gather up a few more aspects of loss which occur to me. We shall miss him in the street. His quiet, leisurely, yet steady onward walk, not to be lightly interrupted; while his grave thoughtful countenance relaxes with a friendly recognition for those he happens to meet. The truth is that he has an appointment and wishes to reach his destination at a certain time. Dr. Duncan is a punctual man and you never see him in a hurry or fussed—recalling vividly to my mind in this important quality two members of our profession whom some of us remember, one of them a great physician, John Abercrombie, the other a still greater surgeon whom most of us knew, James Syme. We shall miss our friend in the chamber of sickness. He has arrived punctual to a minute, and comes in with a quiet step. His expression may be grave but it indicates self reliance and brings hope and confidence to the patient. They say he is reticent. So he is, but he knows when to speak and when to be silent. And we know that silence is golden. Some people say that his manner is dry. There is nothing certainly that can be called gushing about Duncan; but let me tell these people that there is a deep fountain within the man which can show itself on due occasion. The examination of the patient over, we leave the sick room for the consultation. I speak now for general practitioners. You feel that you have to do with a man who forms his conclusions and opinions with care and caution and then holds them tenaciously—a man all of whose professional work suggests by its solidarity and durableness the granite formation of his own native Aberdeen. There is no reticence now. He places his own doubts and difficulties candidly before you and never leads you to suppose that he has a store of wisdom in the background unrevealed. His opinion is unmistakably reasonable and trustworthy." The dinner was held on October 30th, 1877, and Matthews Duncan left his beloved city

to take up the new span of life upon which he had embarked in the Metropolis. He moved into the house at 71, Brook Street, the lease of which he purchased, and lived there all the remaining period of his life in London.

The changes which Duncan made to the teaching at St. Bartholomew's are hard to realize in these days. In London, as in Edinburgh, the charm which he exercised on all around him was soon discovered, and he got on the best terms with all his colleagues on the Staff of the Hospital. The sisters, the nurses, the students and the patients were brought under his spell, and he used to tell his wife that "he believed if he told them to lay down their heads to be chopped off they would do it." His success in practice equally came up to his success in hospital, for few names of note in London could be mentioned into whose homes he had not been called. Among them may be placed Her Royal Highness the Duchess of Albany.

Sir Norman Moore* says of Duncan: "Robertson Smith, the Arabic scholar, migrating in mature life from Scotland to Cambridge, rapidly became as thorough a Cantabrigian as if he had received his education on the Cam, and Matthews Duncan showed an equal power of becoming a member of a new circle in a new nation and was soon as devoted to St. Bartholomew's as if his whole previous medical existence had been spent there."

The teaching of midwifery at St. Bartholomew's was begun in a more or less systematic way in 1825, when the House Committee passed the following resolution: "To secure to the pupils the benefit of instruction in midwifery in the event of there not being any member of the Medical Board educated in that science and competent to teach it. In such contingency the Committee recommend that an election for the midwifery lectureship do take place at the usual Court for the election of officers in every year until the necessity for strengthening the medical school by the talents of strangers shall no longer be necessary by the hospital possessing within itself the competent knowledge and excellence in that branch of the profession as it so eminently is allowed to do in every other." Dr. Conquest, Dr. Ashburner, Dr. (afterwards Sir Charles) Locock and Dr. Lay were appointed in succession, followed by Dr. Rigby in 1837, Dr. Charles West in 1848, and finally Dr. Greenhalgh, who retired in 1877 owing to asthma and ill-health.

The standard of the lectures was not high and the subject had little to attract the attention of students. It is significant to note that Sir James Paget records that he only attended two midwifery lectures in the whole of his student days. Another fact which he points out is of interest to us in studying Duncan's life. He says: "It was not then generally thought amiss that one of my teachers told many stories, some of which were obscene, some very nasty; perhaps some thought them fairly balanced by the care with which in telling the uses of every part and the advantages of every arrangement of parts, he used the method of the natural theology then popular. His statement of each final cause might generally have ended with 'This is exactly what I should have done, if I had had the doing of it.' . . . Such stories, I believe, are now never told and the change is, among the many I have watched, as significant of a vast increase in the habitual decency and, I do not doubt, the real morality of the students."

Duncan was one of the first members of the Staff who raised the moral tone of the lecturing at the Hospital. He was always most firmly convinced of the importance of decency in all pertaining to medical matters and to the teaching of students, although Sir D'Arcy Power tells me that he often had great difficulty in refraining from telling such stories himself during the latter years of his office.

As a lecturer he was of the first rank: "He was slow, precise, and exact in his delivery; but his earnestness and the logical arrangement of his matter, based upon exact scientific method procured a much more enduring effect than would have resulted from a display however brilliant, of mere verbal rhetoric." I am told by one who was a student under him, that his manner was "jerky" during his lectures but was very impressive, and he lectured "on every lawful day—Saturdays included—at 9 a.m." The lectures were attended not only by students at this Hospital but by qualified practitioners all over London. Sir Francis Champneys, while holding the position of lecturer at St. George's Hospital, was a regular attendant.

During the many years of his life as a lecturer Duncan had only one set of notes, which were copied on to a single sheet of foolscap, which was contained in an old black case with an elastic band round it. The notes were much altered and rearranged in their latter days, but nevertheless this piece of paper was the only written copy of his lectures till the appearance of the *Clinical Lectures on the Diseases of Women* in 1879. In the winter months he gave his "fortnightly" demonstration on cases in the wards at the time, and here again he tried to bring his students to base their knowledge of obstetrics and gynæcology on pure scientific fact.

Many amusing stories have been handed down to us which originally came from the life of the great obstetrician. Perhaps the best known is that of Duncan's habit of looking at a specimen of urine and then after apparently dipping his finger in it to taste for

* *History of St. Bartholomew's Hospital*, vol. ii, p. 730.

sugar, giving it to the eager onlookers, who immediately followed his example. Some of them, however, fell into the trap, for they did not observe that the finger which Duncan put into his mouth was not the one which was dipped into the urine. He would turn to them laughingly and say, "Well, it serves you right; you should observe what I do next time." A story he told his clerks when trying to impress upon them that they should never be blinded by the social position of their patients, was that of a duchess who brought a young lady to consult him privately on account of a swelling in the abdomen. After he had examined the patient the Duchess said to him, "It is water, isn't it, doctor?" "Yes, your Grace," he

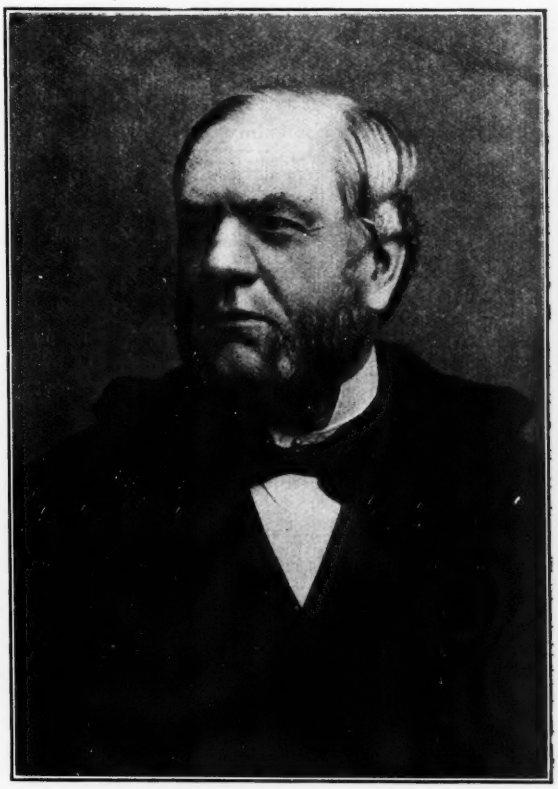
Dr. Matthews Duncan.

A pencil sketch by a pupil, Mr. H. Troutbeck, made during a lecture.

Presented to Martha Ward by Sir Dyce Duckworth.

replied, "you are right, it is water, but there is a little fish swimming in it." When examining a patient he always talked of the "belly" and not the abdomen, and when a patient passed small round hard fæces he used to say in his Scotch way, "She dungs like a sheep." To his students Duncan was usually helpful and courteous, although he treated them very much like he treated his children. He was aloof and very hard to get to know, but always expected the best from everyone. One day a student examined a patient's belly with cold hands, and Matthews Duncan in his usual kind way said to the patient, "Never mind, ma'am, if he has cold hands he has a warm heart." When the patient was gone he drew the student aside and said "You must not do that kind of thing, for when you are in practice you will not have anyone to get you out of your troubles." He seldom reproached students or nurses before the patients.

One of the outstanding facts in regard to Duncan's teaching at St. Bartholomew's is that before his day, in the years 1840–1876, only three students from this Hospital gained the university gold medal in midwifery. But in the decennium beginning with the year 1880, when Duncan's teaching had begun to take effect, this medal was secured each year except in 1884 and 1887



J Matthews Duncan

by one of his pupils, and one of these gentlemen also succeeded in obtaining the scholarship in obstetrics in the same university. Sir William Turner, speaking of Duncan's influence upon the teaching of midwifery, says, "His old pupils will not easily forget him as he worked with them in the wards of the hospital. His grave and serious face surmounted by a black velvet cap, the care with which each case was examined, the appositeness of his remarks often accompanied by a sparkle of dry Scottish humour, made up a personality

which is imprinted deeply on the memory. . . . Much of the original work in obstetrics that has been done in London during the past ten years owes its initiation to his suggestions, and in this direction, quite as much as in his power of exposition, he showed his greatness as a teacher."

Duncan's views on obstetrics were always medical, for he looked with distrust upon new fanciful operations. In his early years of practice abdominal section was seldom if ever undertaken, but as time drew on this operation was constantly performed by Lawson Tait and others. Duncan, however, remained sceptical as to its utility, and in his paper on "Is Ovariotomy Justifiable or Not?"* he put forward his views upon the subject. On his appointment as Physician Accoucheur to Martha Ward the gynæcological operations, performed almost entirely *per vaginam*, were entrusted to the care of a general surgeon, and Mr. Alfred Willett was appointed to undertake such surgical work. Duncan hardly ever performed any surgical operations, but I am told that when he did he showed an able dexterity with his hands.

The sceptical views held by Duncan in regard to ovariotomy and allied operations brought him often into arguments with his opponents; of these Lawson Tait was the most conspicuous. His letters are tinged with a challenge which he was always coaxing Duncan to take up in the press, but from which he (Duncan) wisely refrained.

In London Duncan found little time for literary work, his immense practice, his regular attendance at Medical Societies, his hospital teaching, fully occupied his time. He used to rise at half-past seven in the morning and go to bed usually well before midnight, which was different from the earlier days in Edinburgh, when he often worked till the early hours of the morning. He never allowed one day's work to run into that of another, and it was by method, punctuality and never wasting a moment that he accomplished this. He read all the current literature upon his subjects and was a veritable source of reference to those in need.

Holidays were few except during the summer, when a month or so was spent in the country. In 1878 the old house of Ashiestiel on the river Tweed, where Sir Walter Scott had lived and had written *Marmion*, was rented by Duncan, and friends and relations were entertained. Several holidays were spent here, and it was not until the house became uncomfortably in need of repair that a change was decided upon. He had been seriously contemplating the purchase of a country house where he might spend his holidays and entertain his friends when away from London, and he finally decided to rent Appin House in Argyllshire on the shores of Loch Linnhe. The scenery in the neighbourhood was perfect, and boating, fishing and shooting were always close at hand. His sister, in describing a holiday spent at Appin House, says: "James busied himself with literary work in the library until luncheon time; after that going in heartily with whatever pastime was on foot. There were two boats and we often went fishing on Loch Linnhe. We also used the boats to cross to Shoona—their own island—and had a picnic there, Mrs. Lees and a footman having gone beforehand to prepare. Then James and his wife, who arranged all the amusements with skill and tact, took me for beautiful drives—to Duror Bridge, Loch Creran, Port Appin, Ballyvedan, Shian Ferry, etc. . . . On our rambles along the shore his quick eye descried on the one hand rare ferns and mosses and on the other strange seaweeds and shells, all of which he could readily name." Another pastime Duncan always enjoyed when on holiday was bathing; this he had learnt in his youth from his parents, and whenever he had a chance in later life he would readily take advantage of it.

* *Lancet*, 1857.

II.

1890.

True friendships are among the greatest treasures a man may possess. Duncan was especially fortunate in having some of the greatest names in nineteenth century medicine as his own devoted friends. Of these something has already been mentioned during the earlier part of his life, but these names must be supplemented by those of others who, during his later life, always stood by him.

First and foremost came Joseph Lister. Sir Rickman Godlee in his *Life of Lister* (pp. 613–4) says of Lister's friends: "None of these, however, were so near to him as his old fellow student Sir William Roberts who migrated from Manchester in 1889, and Matthews Duncan, who was translated from Edinburgh to St. Bartholomew's in 1877. . . . Very different from Roberts was the somewhat dour Aberdonian, Matthews Duncan, Lister's senior by one year . . . he rapidly gained a prominent position, partly by the way he brought science to bear upon his particular speciality, partly by his skill, but in great measure by his sterling uprightness and because throughout his life he made it his chief aim to purify and elevate his branch of the profession.

"In spite of his gruff manner he was beloved by his patients and so much respected by his younger colleagues that it was said they copied him in everything, even in the colour of his brougham, the scarlet wheels

of which were afterwards as well known in London as they had been in Edinburgh . . . except for the time Lister was in Glasgow they were fellow citizens from 1853 till Duncan's death in 1890. During all these years there was probably none to whose judgment and to whose advice Lister trusted more completely. Beneath his rough exterior there was a fund of dry wit of the choicest character and an unbounded kindness to old and young. His success in London was even greater than in Edinburgh, and his adherents became the leading lights of gynæcology. He was a frequent guest at Park Crescent, and it was an amusing sight to see him after dinner surrounded by a group of admirers, maintaining with a grave face and in the broadest Scotch some outrageous paradox such as 'There is nothing on airth to prove that quinine cures ague.'" The friendship between Duncan and Lister is best appreciated by reading some of the letters which are in existence, and which we have the privilege of consulting to-day.

Of Duncan's other friends Sir James Paget, Sir William Jenner and Sir William Gull in London, Prof. Tait in Aberdeen, Dr. John Brown of Edinburgh, together with many of his junior colleagues and members of the Staff at St. Bartholomew's, remained loyal till his death. Duncan had many other friends, but it is said of him that he had few great friends, but to such as he had, what a great friend he was! Of those outside his profession I must mention in passing Queen Victoria. Duncan was a regular visitor to Windsor and the Queen used to enjoy his company; she often tried to persuade him to stay the night in the Castle but Duncan usually excused himself, and it became necessary for the Queen to run a special train back to London late at night for her guest. It is most probable that the Queen was attended professionally, as Sir William Jenner used to ask Duncan's opinion in many cases.

Duncan had no hobbies; reading was his recreation even largely on holidays. He read everything, remembered all he read and could quote place and reference with the greatest ease. It was this which, among other things, enabled him to do the immense work which he did. It was not necessary for him to read up a subject; it was there ready in his memory, thought over, digested, and ready for the occasion, only waiting a suitable case to call his energies forth to the supplying of a vacant place or correcting an erroneous idea. Duncan was also a great correspondent; he wrote close upon two hundred letters a week, all of which were carefully executed in his own handwriting; he wrote regularly to many of the greatest men in science during his day, among them being Huxley, Darwin and Galton. He was the recipient of many honours during his latter days. He was made a Doctor of Medicine in the Universities of Dublin and Durham and Honorary Fellow in King's and Queen's College of Physicians in Ireland, a Doctor of Literature in the Universities of Edinburgh and Cambridge, Fellow of the Royal College of Physicians of London, a Fellow of the Royal Societies of London and Edinburgh, besides being an honorary member of many of the medical societies at home and in America, Russia, Austria, Germany and Norway. He was an examiner in midwifery in the universities of St. Andrews, London, Oxford and Cambridge, and in April, 1883, he was invited to become one of the Crown Nominees on the General Medical Council.

At St. Bartholomew's Duncan took an interest not only in his teaching, in the lecture theatre and at the bedside, but in the general welfare of the Medical School. He was a regular supporter of the Abernethian Society, not only in attending meetings or preparing votes of thanks, but in addressing the Society. He delivered the opening Sessional Address in 1886, and took for his subject "Concerning Medical Education."

Of the treatment of patients Duncan used to say, "I rather push my patients from me than attract them; you lose your influence if you see them too often." He also held that a doctor should never nurse his patients; it was not his job, and if he saw his patients too often he could never notice an improvement, or the reverse, in their condition. He always refused to sit up at night or to remain for any length of time in a house; if it was necessary for a medical man to be within a minute's call he advised that a young one should be there. Many letters from old patients testify as to their high esteem of his kindness towards them.

Duncan had a great respect for manliness; he liked one who would look him full in the face and who had sufficient strength of character combined with other noble qualities. The highest praise he could give was to say, "Well, he is a man." It is said there are three or four people to whom he paid this special compliment —Sir Walter Scott, Dr. Kilgour, and Prof. Ogston of Aberdeen, also his great friend, Sir William Jenner. He was most charming to the opposite sex, although he was greatly against their entrance into medicine.

Little has been said so far of Jane Duncan, his wife. She was a very attractive person and always fulfilled her function as hostess to perfection. She played little part in her husband's professional life beyond the entertaining of his guests, and I am told that, when living at 71, Brook Street, it was impossible to tell that the house was one of an important consulting physician. Medical matters were never mentioned.

The years as they roll onward, like clouds hastening in a stormy sky, bring dimness as the rain of ages descends, and so it was with Duncan. Early in 1890 it was noticed that he did not look well and seemed in very low spirits. He suffered a good deal from gout and had eczema badly. His interest in life seemed to wane, and he appeared to know that his end was not far off. He once said to the attentive Mrs. Lees, "You know I'm dying, but I don't want to alarm my family sooner than necessary." It soon became necessary for him to give up lecturing (in the middle of June) at the Hospital and to abandon public life. He decided to resign his appointments at the Hospital, and the rough copy of a letter which he intended to send to the Governors was discovered in his desk after he was dead.

For some time he had been suffering from attacks resembling angina pectoris, and it was thought advisable that he should seek relief at one of the German watering-places. Toward the end of June he started for the Continent accompanied by his wife and some of his family. They halted for a short time at Blankenberghe in Belgium, where the attacks of angina became very frequent. They, however, were not severe, and it was considered safe to proceed onward to Baden-Baden, where they arrived on August 7th. After a week at this spot his symptoms had so much improved that he rejoiced in not having an attack for twenty-four hours. However, on Sunday, August 17th, he had a very severe seizure, from which he nearly died. At the time he had great difficulty in breathing, with a feeble flickering pulse, and his skin was bedewed with perspiration. These attacks were repeated on the two following days, and on August 20th, his condition was such as to cause great anxiety. He was attended by Dr. Aldren Turner, of London, and Dr. Gilbert, of Baden-Baden. His condition improved, and his heart appeared to regain its tone to some extent. During the next week convalescence proceeded apace, so much so that Dr. Muirhead, of Edinburgh, who came over from Wiesbaden, recommended that he might be taken back to London during the following week. Every preparation for the journey had been made when, on Monday, September 1st, as he was sitting quietly in bed towards the late afternoon, a loud snoring respiration was heard and he died instantaneously, at 5 p.m.

"With what strife and pains we come into the world we know not, but it is commonly no easy matter to get out of it," Sir Thomas Browne says, and having regard to the uncertainties of the last stage of all, the average man will be of Cæsar's opinion, who, when questioned at his last dinner party as to the most preferable mode of death, replied, "That which is the most sudden."

The loss sustained by the profession and by his friends is portrayed in the many letters and telegrams received by Mrs. Duncan, amongst which stands out the message from Queen Victoria. The funeral was held on September 8th; a short service was first held at St. Mark's, North Audley Street, and thence the coffin was taken to the Islington Cemetery at East Finchley. There was a large gathering as the last ceremonies were performed; the Queen commanded Dr. Quain to represent her, while Sir William Savory, Dr. Andrews and Mr. Thomas Smith represented St. Bartholomew's Hospital. For the Obstetrical Society Dr. John Williams and Dr. Champneys, and among his friends Sir William Turner, Dr. Muirhead from Edinburgh and Prof. Ogston with many others from Aberdeen, were present, together with numerous relatives and private friends.

Letters of sympathy poured in from all parts of the world to Mrs. Duncan and her family, and finally it was decided that a memorial should be inaugurated at St. Bartholomew's Hospital in the form of a prize for the best scholar in midwifery every year. This prize exists to-day and perpetuates his name as he would have wished, in encouraging the scientific study of midwifery and gynæcology among students.

> "He sought not praise and praise did overlook
> His unobtrusive merit; but his life,
> Sweet to himself was exercised in good
> That shall survive his name and memory."
> WORDSWORTH ("The Excursion").

J. MOLINEUX JACKSON.

ABERNETHIAN SOCIETY.

THE Society has been lucky enough to secure promises of lectures during the year 1931–32 from the following eminent members of the profession:

On November 3rd, Dr. W. Langdon Brown will give an address on "Dr. Robert Bridges, the Poet of Evolution." In December there will be a lecture on "Social Evolution and Birth Control," by Dr. Crichton Miller, and in April an address on "The Last Meal and other Notes," by Dr. R. M. Bronté.

Several "clinical evenings" will be held during the winter session, at which anyone is invited to show cases of interest on notification to the Secretary. It is hoped that meetings of the Society can be arranged, at which short papers may be read by members, and it is suggested that a discussion between the "surgeons" and "physicians" on some debatable subjects may be arranged, the debates being initiated by some of the more senior members of the Hospital.

The "Hospital" is reminded that students, by being members of the Students Union, are, *ipso facto*, members of the Abernethian Society. The secretaries, Mr. G. D. Kersley and Mr. J. M. Jackson, will be very glad of any helpful suggestions or criticisms, and for the names of any volunteers who will read papers or show cases at meetings.

STUDENTS' UNION.

RUGBY FOOTBALL CLUB.

ST. BARTHOLOMEW'S HOSPITAL *v.* O.M.T.

The first game of the season was against the O.M.T. at Teddington. The ground was in excellent condition, and at the outset Bart.'s pressed, but were unable to penetrate the O.M.T. defence. The O.M.Ts., however, were the first to score, for a misplaced short punt by a Hospital back gave them the opportunity to attack, and R. O. Turnbull touched down between the posts for Tebbutt to convert (0—5). Bart.'s reduced the lead before half-time, when, following good work by Briggs and Powell, the Old Boys were penalized for handling in the scrum, and W. M. Capper kicked a good goal (3—5). The Hospital started the second half in poor fashion, and within a quarter of an hour the O.M.T. were leading by ten points through tries scored by Thompson and Turnbull (3—13). Bart.'s rallied strongly, however, and during the last ten minutes attacked constantly, and a passing movement in which no less than ten men participated, ended in R. M. Kirkwood scoring. J. A. Nunn converted (8—13). Before the end Capper sent in D. M. E. Thomas for an unconverted try.

Final score.—O.M.T., 2 goals 1 try (13 pts.); Bart.'s, 2 goals (1 penalty) 1 try (11 pts.).

The team played well as a whole, the most pleasing feature being the manner in which they lasted out a hard game. The pack were good in tight scrums and in the loose, the leadership and example of W. M. Capper being invaluable. The backs played soundly, but would do well to make certain of finding touch when kicking, as nothing tires a pack more than the failure of its backs to do so. F. O. Ward, playing his first game for the Hospital at scrum-half, sent out many excellent passes and showed much promise. An account of this game cannot omit a reference to the excellent refereeing of W. W. Wakefield.

Team.—C. W. John (*back*); D. M. E. Thomas, F. J. Beilby, R. M. Kirkwood, J. D. Powell (*three-quarters*); J. A. Nunn, F. G. Ward (*halves*); W. M. Capper (capt.), B. S. Lewis, J. R. R. Jenkins, G. D. S. Briggs, K. J. Harvey, J. M. Jackson, D. W. Moynagh, A. T. Blair (*forwards*)

UNITED HOSPITALS HARE AND HOUNDS.

The United Hospitals will start their cross-country activities on Wednesday afternoon, October 14th. We have a very promising season before us, and an excellent fixture list, including our annual matches with such leading clubs as the South London Harriers. Blackheath Harriers, Orion Harriers, and in addition three 'Varsity fixtures. Dublin University visit us early in December, and this match is perhaps the best of the season. We always have a great struggle with them, and this year they will be captained by the Irish international, Jimmie Craig. However, it is hoped that the U.H.H.&H. will be victorious, as in 1929. Oxford University will be running against us over their "Shot-over" course on Saturday, January 30th, 1932. It will be recalled that the Hospitals beat the 'Varsity over the Oxford course last year. An old fixture, which had been dropped for some years, has been revived, and we will entertain the Cambridge team over our "home" course at Richmond on February 17th, 1931.

For the benefit of freshers, a word is necessary with regard to the organization of the Club. Bart.'s does not run a separate cross-country club, but, together with all the other teaching hospitals in London, helps to form the United Hospitals Hare and Hounds. This is one of the oldest clubs in the country. There is a run every Wednesday afternoon, and on an occasional Saturday. Anyone so inclined may run in a minor match, while a team of six is chosen for the 'Varsity matches and any important away fixtures. Those not desiring to race may always take a training run, and there is usually a small contingent of the less ambitious members of the Club, who are content to go for a "gentle trot." After Christmas, preparations for a most important event—the Inter-Hospitals Championship—commence to be made. When there is no match the individual hospital teams endeavour to get in all the team work that is possible. The secret of a club's success in this sport depends not so much on individual talent as on judicious "packing," for which a comprehensive knowledge of the capacities of one's team-mates is essential. This knowledge can only be obtained by consistent training together. For the last two years St. Thomas's have won the championship, though on each occasion Bart.'s ran them very close. In fact last year only 2 points decided the result. There is every reason to believe that this year we will be successful in regaining the lost laurels.

Our training headquarters are at the Dysart Arms, Richmond. There is an excellent train service every five to ten minutes from either Waterloo or Blackfriars. For the opening run all men are requested to be ready to start at 3.15 p.m.

All "freshers" who have run at school, or who would like to start, are advised to get in communication with G. Dalley or J. R. Strong at their earliest convenience. J. R. S.

HOCKEY CLUB.

Last year's season was disappointing. With most of the previous year's 1st XI available, we had looked forward to retaining the Hospital Cup we had just won—for one year at least, if not for many more to come. Perhaps we were too confident; whatever the reason we lost the Cup, being beaten quite unexpectedly by King's College Hospital in the semi-final round. The second XI also reached this round, only to be beaten by Guy's after a replay.

The match record for the season, on the whole, was quite good. It would doubtless have been better if we could have turned out three teams *at full strength* every Saturday. We suffered, too, from the weather, one or two good fixtures having to be scratched in consequence.

This year we have most of last year's 1st XI available, though we shall miss White and Jameson Evans. Hodgkinson we hope will still be with us. Prospects are, therefore, bright, and the 2nd and 3rd teams should also do well. Full fixture lists have been arranged for all three teams. We have some keen new members joining us. Still, we can do with many more. Will all those freshers who play hockey or who wish to take up the game put their names down on the list provided in the Abernethian Room, and so make themselves known to the Secretary? A. D. ILIFFE.

ASSOCIATION FOOTBALL CLUB.

An attractive fixture list has been arranged for the season 1931–2, and, under the leadership of R. G. Gilbert, a successful season is expected. The Club has entered for the London University Cup Competition, in addition to the two Inter-Hospitals Cups, and is hopeful of securing these trophies once more.

Most of last season's players are available, but there is plenty of room for new talent in the Club, and freshmen are warmly welcomed. These new members, and all those wishing to play soccer this season, are requested to add their names to the list in the Abernethian Room. They will be given a trial within the first two weeks of term.

D. R. S. HOWELL,
Hon. Sec.

ACKNOWLEDGMENTS.

The British Journal of Nursing—Bulletins et Mémoires de la Société de Médecine de Paris—The Clinical Journal—L'Echo Médical du Nord—Les Echos de la Médecine—Guy's Hospital Gazette—The Hospital—The Kenya and East African Medical Journal—King's College Hospital Gazette—The Nursing Times—St. George's Hospital Gazette.

TIMES FOR ATTENDANCES IN THE OUT-PATIENTS' AND SPECIAL DEPARTMENTS.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
Medical Out-Patients	Dr. G. Graham at 9 a.m.	Prof. Fraser and Dr. Hilton at 9 a.m.	Dr. Geoffrey Evans at 9 a.m.	Dr. F. G. Chandler at 9 a.m.	Prof. Fraser and Dr. Carmichael at 9 a.m.	Dr. G. Bourne at 9 a.m.
Neurological Clinic	—	—	—	Dr. Hinds-Howell at 1.30 p.m.	—	—
Surgical Out-Patients	Prof. Gask at 9 a.m.	Mr. R. M. Vick at 9 a.m.	Mr. J. B. Hume at 9 a.m.	Mr. Paterson Ross at 9 a.m.	Mr. J. E. H. Roberts at 9 a.m.	Mr. Keynes at 9 a.m.
Diseases of Women	Dr. Shaw at 9 a.m.	—	Dr. Donaldson at 1.30 p.m.	—	—	Dr. Shaw at 9 a.m.
Ante-Natal Clinic	—	—	—	Dr. Donaldson at 12.15 p.m.	—	—
Orthopædic Department	Mr. S. L. Higgs at 1 p.m.	—	—	Mr. R. C. Elmslie at 1 p.m.	—	—
Throat and Nose Department	Mr. Bedford Russell at 1 p.m.	Mr. F. C. W. Capps at 9 a.m.	—	Mr. Bedford Russell at 9 a.m.	Mr. F. C. W. Capps at 1 p.m.	—
Aural Department	Mr. S. R. Scott at 1 p.m.	Mr. T. H. Just at 9 a.m.	—	Mr. S. R. Scott at 9 a.m.	Mr. T. H. Just at 1 p.m.	—
Ophthalmic Department	Mr. Rupert Scott at 1 p.m.	Mr. Foster Moore at 1 p.m.	—	Mr. Rupert Scott at 1 p.m.	Mr. Foster Moore at 1 p.m.	—
Skin Department	—	Dr. Roxburgh at 9 a.m.	Dr. Roxburgh at 9 a.m.	—	Dr. Roxburgh at 9 a.m.	—
Psychological Department	—	—	—	—	Dr. Porter Phillips at 1.30 p.m.	—
*Electrical Department	Dr. Cumberbatch. Males at 1 p.m.	Dr. Cumberbatch. Females at 1 p.m.	—	Dr. Cumberbatch. Males at 1 p.m.	Dr. Cumberbatch. Females at 1 p.m.	—
*X-Ray Department	9.30 a.m. and 1.30 p.m.	9.30 a.m. and 1.30 p.m.	9.30 a.m.	9.30 a.m. and 1.30 p.m.	9.30 a.m. and 1.30 p.m.	9.30 a.m.
*Exercises and Massage Department	9 a.m. and 1.30 p.m.	9 a.m. and 1.30 p.m.	9 a.m. to 1 p.m.	9 a.m. and 1.30 p.m.	9 a.m. and 1.30 p.m.	9 a.m. to 1 p.m.
Diseases of Children	Dr. Harris at 9 a.m.	Dr. Harris at 9 a.m.	Dr. Harris at 9 a.m.	Dr. Harris at 9 a.m.	Dr. Harris at 9 a.m.	Dr. Harris at 9 a.m.
Dental Department	Mr. Fairbank at 9 a.m.	Mr. Coleman at 9 a.m.	Mr. Hankey at 9 a.m.	Mr. Fairbank at 9 a.m.	Mr. Coleman at 9 a.m.	Mr. Hankey at 9 a.m.
Tuberculosis Dispensary	—	12.30 p.m.	†5 to 7 p.m.	—	11.30 a.m. New cases only, 2 to 3 p.m.	—
Venereal Department	Men, 5 to 7 p.m.	Women and children, 4 to 6 p.m.	—	Men, 12 to 2 p.m.	Women and children, 12 to 2 p.m.	—
Plastic Surgery	Sir Harold Gillies at 2 p.m.	—	—	—	—	—

* Patients are not seen in these Departments unless recommended by the Medical Staff.
† These hours are intended for patients who cannot attend at mid-day.

CORRESPONDENCE.

EARLY ANÆSTHESIA.

To the Editor, 'St. Bartholomew's Hospital Journal.'

DEAR SIR,—I feel sure Mr. Paterson Ross must have alluded to another early method of producing insensibility as well as loss of muscular rigidity in the other part of his paper not quoted by you. I have always understood that immersion in a really hot bath (100°–104°) for twenty minutes will bring about complete relaxation of muscles and such faintness as would allow of many short operations on any of the extremities. The bath was used chiefly for the reduction of dislocations or for the reduction of semi-strangulated hernia. The very powerful tourniquets or the key-handle covered with leather which was pressed by the assistant above the clavicle or in the groin must have produced almost complete loss of sensation in the arm or leg, as the main nerve-trunks were so severely pressed upon up to the stage where all ligatures had been applied. When I entered St. Bartholomew's in October, 1870, all we students at once were expected to attend the operations on Wednesdays and Saturdays, and so were on the very threshold of the introduction of general anæsthesia. I often wonder whether the statistics of the late Joseph Mills, who administered his chloroform on a simple piece of clean lint, using his fingers for the regulation of the air supply, would not reveal as good if not better results than any of the numerous modern methods. I think John Astley Bloxham was the first whole-time Anæsthetist when I entered in 1870, and when he left to go on the staff of Charing Cross Hospital, A. E. Cumberbatch took up the duties till Mr. Joseph Mills (a brother-in-law of W. Morrant Baker) a *bonâ fide* specialist was appointed whole-time Anæsthetist to the Hospital. The simple piece of lint—a fresh piece for every patient—meant the absence of the gross infections that must have ensued in the earlier days of all mouth-pieces. How many cases of post-operative septic pneumonia must have occurred from the mouth-pieces as well as from the various ethers in use! When Lister first came to London with Watson Cheyne as his anæsthetist, for a time he could not bring himself to admit there was any danger (to speak of) in the administration of chloroform by the open method (his plan being a cone made from the corner of a stiff face towel). Calling to mind the infrequency of any tragic accidents in the operating theatres from the anæsthetic in those early days, I might mention that Luther Holden, who was like Paget in being very sensitive over the feelings of patients, always gave a dose of brandy or port wine to any who looked or felt terrified whilst lying waiting their turn to be carried into the theatre. That dose of Dutch courage might, with advantage, be more in use in these days to prevent rapid collapse in the early stage of anæsthesia. Also when cocaine was first introduced many tragedies happened, and these were easily prevented if only a mild ether or alcoholic stimulant were administered before giving the cocaine, locally or by injection. When I left St. Bart.'s in 1876 already the ritual of antiseptic dressings had started, following upon Thomas Smith having sent his house surgeon Mark Vernon to Edinburgh to be initiated.

Yours truly,
J. KINGSTON BARTON,
M.R.C.P.(Lond.).

September 11th, 1931.

A SUGGESTION FOR ECONOMY.

To the Editor, 'St. Bartholomew's Hospital Journal.'

DEAR SIR,—May I remonstrate with the habit developed in recent years of sending hospital in-patients, as well as out-patients, home with large supplies of drugs and treatment? Many of the patients whom general practitioners refer to hospital are quite capable of paying for any drugs that are recommended by the consultants at hospital. Besides infringing on the legitimate province of private practice, this custom costs the Hospital large sums of money and contributes to its already large debts.

I am,
Yours faithfully,
R. MURRAY BARROW.

Wisbech;
September 21st, 1931.

REVIEWS.

AIDS TO MEDICAL DIAGNOSIS. By A. J. WHITING, M.D. Fourth Edition. (London: Baillière, Tindall & Cox, 1931.) Pp. viii + 180. Price 3*s*. 6*d*. net.

The production of a fourth edition of this book is a testimony in itself. The diseases, except the acute infectious diseases, are grouped on a physiological basis. It is remarkable how complete a work of this size can be. The author has left out hardly anything important. The section on diseases of the heart, including well-placed pulse tracings and diagrams, is particularly full and clear, and might well be used as an introduction to the study of the clinical disorders of the heart-beat. More importance might have been ascribed to the value of inspection, not only in heart disease, but particularly in diseases of the lungs and pleuræ. The opening paragraph is not well expressed, and the diversity of physical signs is rather confusing. Surely it would have been better to explain that bronchial breathing appears as a result of increased conduction of sound between the bronchus and stethoscope; the apparent paradox of finding this sign with fluid, new growth or consolidation by inflammation would then be explained. Disease of the lungs, and in fact the majority of diseases except the fevers, are discussed according to their signs and symptoms, *e. g.* "diseases with dullness on percussion and diminished vocal resonance." In the investigation of renal disease the use of the separator is still mentioned, although the instrument is rarely used to-day. No mention is made of the value of a leucocyte count in the diagnosis of difficult cases of perinephritic abscess. In the section on nervous diseases an unusually full description is given in tabular form of the various types of aphasia. In the table of segmental nerve supply to muscles it is stated that the hypoglossal supplies part of the sterno-mastoid; the spinal accessory is also said to supply the pharynx, œsophagus and larynx, but no mention made of the sterno-mastoid or trapezius. These features spoil what should be a very useful part of the book. The book is on the whole well produced, and the criticism that it divides medicine into water-tight compartments, if true, is counter-balanced by the fact that it is necessary to clarify and classify the subject in this way for the student who is up for his final examination. The work makes no pretence to be either complete or strictly accurate. As an aid to medicine, considering its enormous scope, it is remarkably compact and readable.

AIDS TO MEDICAL TREATMENT. By J. T. LEWIS and T. H. CROZIER. (London: Baillière, Tindall & Cox, 1931.) Pp. vii + 244. Price 3*s*. 6*d*. net.

This volume makes its first bow to the world of medical students on its appearance amongst the ranks of Students' Aids. The classification is similar to that of its senior colleague, *Aids to Medical Diagnosis*. It is encouraging to note the value of specific anti-serum in erysipelas—a treatment usually considered of no avail by the majority of books. The use of disinfectants by intravenous injection, though now practically abandoned, is mentioned in septicæmia. The author recommends the use of convalescent serum in the treatment of measles. The intrathecal administration of antitetanic serum is considered inferior to the intravenous route, which is directly contradictory to the prevalent opinion. The section on diabetes is well arranged, the tables of food values and diets being particularly useful. The preliminary calculations for a maintenance diet are fully explained. The difficulty often found in keeping the patient with pernicious anæmia on the full dose of liver is realized, and several useful and attractive methods of presenting the liver are given. Diseases of the lungs and pleuræ are thoroughly treated, the prescriptions being all useful and well-tried ones. Disseminated sclerosis is discussed, and treatment by weekly injections of autogenous vaccines of the "spherula insularis" particularly recommended. Occupational neuroses are not omitted, even in a small work of this character, and space is found for the cramps of writers, telegraphists, pianists and violinists. The feature most likely to gladden the heart of student and practitioner alike is the skin section. There is no excuse for leaving the patient with two or more applications and telling him to "use these." Careful detail as to the correct preparation of the area before application of remedies and copious prescriptions make this a really valuable section. The

concluding section on medical nursing, adequately written by Miss E. Garvin, Sister Tutor to the Royal Victoria Hospital, Belfast, supplies many details of which the student may be ignorant on how to apply poultices, care of the skin, blisters, cupping, baths and packs. These are occasionally asked by an unfeeling examiner, often by an anxious relative who may be nursing the patient. The book is all the more valuable for this addition.

THE THYROID AND MANGANESE TREATMENT: ITS HISTORY, PROGRESS AND POSSIBILITIES. By HERBERT W. NOTT, M.R.C.S., L.R.C.P. (London: William Heinemann [Medical Books], Ltd., 1931.) Pp. 265. Price 7*s.* 6*d.*

Medical therapeutics has always been guided by the maxim, *tolle causam*. Yet in practice physicians long for the day when diseases shall have been reduced to simple causes and simple remedies produce striking effects.

A book of which its author confesses that it has been difficult to write must obviously be difficult to review and criticize. "If you can look into the seeds of time . . ." One wonders what an Osler would have said of a remedy (potassium permanganate *p. r.*, or as combination cachet with thyroid *p. o.*) in the treatment of such divers afflictions as eclampsia, gout, warts, gastric ulcer, deafness, chorea, diabetes, acne, and chronic mastitis! The interaction of manganese, potassium, thyroid extract, and the free oxygen from reduction of permanganate is claimed to increase the oxidative processes in the tissues and fluids of the body; but the author concentrates attention rather on the application of the treatment in practice. The book is overcrowded with case-reports, and much of the matter appears ephemeral. There is an interesting sketch of Sir Dawson Williams, to whose memory the work is dedicated.

THE CREAM OF BEAUTY. By H. STANLEY REDGROVE, B.Sc., A.I.C. (London: Wm. Heinemann, 1931.) Pp. xii + 184. Price 5*s.*

"My face is my fortune, sir," she said. These words form the keynote of this little book on beauty culture, written in light vein by a well-known authority on perfumes and cosmetics. His pages contain much that every woman, and consequently every medical man, ought to know. He never trespasses on the domains of the dermatologist, but confines himself strictly to those cosmetics which are of definite hygienic value, or which may be used without injury to remedy slight defects and give the finishing touches to the beauty resulting from good health. The composition and uses of the various toilet preparations are fully described, and instructions are given for the compounding of the simpler ones at home. The chapters on the care of the hair are excellent. His chapter on superfluous hair will prove disappointing to many, for he condemns every current method of dealing with this problem. Axillary hair he regards as a beauty asset, and he points out how it should be treated and cared for in order that it may merit this appellation. Altogether a very attractive and readable little volume.

A MANUAL OF TUBERCULOSIS FOR NURSES. By E. ASHWORTH UNDERWOOD, M.B., D.P.H. With an Introduction by Prof. J. R. CURRIE. (Edinburgh: E. & S. Livingstone, 1931.) Pp. vii + 272. Illustrated. Price 6*s.* 6*d.*

In the introduction to this book by Prof. Currie the last sentence sums up its main virtues. It is described as likely to "prove an attractive and trustworthy guide." Dr. Underwood has left very little untouched in this manual, and deals adequately with every aspect of tuberculosis in every walk of life, from the prince in his palace, to hospital, sanatoria, chronic tuberculosis wards, dispensaries, private houses and orthopædic institutions. The pathology is concise and to the point. The book is up to date throughout. The author deals justly and fairly with tuberculin and all other points on which there is difference of opinion. He appears to have no fads. He knows how to make his subject clear with similes and commonplace language, but nobody could accuse him of "talking down" to his readers. He makes those who work in tuberculous places feel they are doing a progressive and admirable work, with great responsibilities and far-reaching effects. We would rather have seen a better method of administering oxygen than the tube and funnel illustrated on p. 132. Even in such a small book space is found for consideration of refinements of technique in administration of drugs, diet and local applications. The section and illustration on artificial pneumothorax is admirably clear. In the section on tuberculous cystitis mention might well have been made of the marked dysuria and frequency of micturition occurring in this disease. The book should clear away much of the doubt sometimes present in readers' minds as to whether tuberculosis is hereditary, or why people develop the disease. It suggests what can be achieved by proper sanitary precautions. The volume is well printed in large type, and at once impresses the reader by its business-like and attractive appearance.

DISEASES OF WOMEN. By THOMAS G. STEVENS. Reprinted and thoroughly revised March, 1931. University of London Press, Ltd., 1931. Price 20*s.*

The new revised edition of this text-book maintains the high standard of its predecessors. It is a most excellent short text-book of gynæcology which can be especially recommended for the use of students reading for the qualifying examinations. It is full of practical details, as well as material from which a thorough knowledge of the ground-work of the subject can be attained.

The text is divided into twenty chapters, and the illustrations are numerous, extremely clear and easy to understand. The photomicrographs have always been a useful feature of this book, and help to reveal the morbid histology of the various pathological conditions in a most interesting manner.

Treatment of the various conditions met with is clearly given, even to the detailed account of many prescriptions, which must help the student to obtain a practical grasp of the subject with comparative ease. In this new revised edition a brief account is given of the modern views on the internal secretions of the ovary and other glands, and a short discussion on the difficult question of irregular menstruation and its relationship to ovarian secretions. Pelvic endometrosis is referred to in a short chapter. At the end of the book are three chapters devoted to preparations for operation, after-treatment and post-operative complications in which these subjects are shortly but clearly discussed. This edition is undoubtedly one of the best small text-books on diseases of women which is obtainable, and from it the reader should be able to acquire a sound knowledge of the general principles of gynæcology.

RECENT BOOKS AND PAPERS BY ST. BARTHOLOMEW'S MEN.

HARMER, DOUGLAS, F.R.C.S., and RUSSELL, BEDFORD, F.R.C.S. "The Treatment of Frontal Sinusitis by Intubation: An Analysis of Sixty-three Cases." *Proceedings of the Royal Society of Medicine*, April, 1931.

HOSFORD, B. B., M.D. "Congenital Dilatation of Ureter." *Proceedings of the Royal Society of Medicine*, March, 1931.

——— "Unusual Case of Congenital Syphilis." *Proceedings of the Royal Society of Medicine*, May, 1931.

HOSFORD, JOHN P., M.S., F.R.C.S. "Prognosis in Fractures of the Carpal Scaphoid." *Proceedings of the Royal Society of Medicine*, May, 1931.

HOWELL, B. WHITCHURCH, F.R.C.S. "Arthroplasty of Fingers for Malunion of Fractures of Phalanges; Result Two Years after Operation." *Proceedings of the Royal Society of Medicine*, May, 1931.

LLOYD, ERIC I., F.R.C.S. "Section of Neoplasm Shown at October Meeting as ? Endothelioma of Foot." *Proceedings of the Royal Society of Medicine*, March, 1931.

——— "Sarcoma of the Prostate at the Age of 8 Years." *Proceedings of the Royal Society of Medicine*, May, 1931.

——— "Tuberculous Osteitis of Left Femur." *Proceedings of the Royal Society of Medicine*, May, 1931.

LLOYD, W. E., M.D. "Specimen: Pulmonary Tuberculosis in an Infant aged 21 Months." *Proceedings of the Royal Society of Medicine*, June, 1931.

MILES, W. ERNEST, F.R.C.S. "The Present Position of the Radical Abdomino-Perineal Operation for Cancer of the Rectum in Regard to Mortality and Post-Operative Recurrence." *Proceedings of the Royal Society of Medicine*, May, 1931.

MOORE, R. FOSTER, F.R.C.S. "Cataract from Exposure to X-Rays." *Proceedings of the Royal Society of Medicine*, April, 1931.

——— "Glioma of the Retina." *Proceedings of the Royal Society of Medicine*, June, 1931.

MORLOCK, H. V., M.D. "Banti's Disease with Rheumatic Endocarditis." *Proceedings of the Royal Society of Medicine*, April, 1931.

MYERS, BERNARD, C.M.G., M.D. "Gangrene of the Foot in Diabetes." *Proceedings of the Royal Society of Medicine*, April, 1931.

——— "Purpura Gangrenosa in Diabetes." *Proceedings of the Royal Society of Medicine*, April, 1931.

——— "Diabetic Coma in a Boy." *Proceedings of the Royal Society of Medicine*, April, 1931.

——— "Two Cases of Essential Thrombocytopenia Purpura Hæmorrhagica Five Years after Splenectomy." *Proceedings of the Royal Society of Medicine*, May, 1931.

ROCHE, A. E., F.R.C.S. "Simple Polyp of the Iliac Colon in a Woman aged 64." *Proceedings of the Royal Society of Medicine*, March, 1931.

ROSS, J. PATERSON, M.S., F.R.C.S. "The Anatomy of the Spinothalamic Tract in Relation to Cordotomy." *Proceedings of the Royal Society of Medicine*, May, 1931.

RUSSELL, BEDFORD, F.R.C.S. *See* Harmer and Russell.

THOMAS, C. HAMBLEN, F.R.C.S. "Incomplete Perforation of the Tympanic Membranes in a Case of Acute Otitis Media." *Proceedings of the Royal Society of Medicine*, June, 1931.

TWEEDIE, ALEXANDER R., F.R.C.S. "Carcinoma of Pharynx, Suggesting Local Control by Diathermy." *Proceedings of the Royal Society of Medicine*, June, 1931.

——— "Tongue Showing Inflammation of Glands of Blandin." *Proceedings of the Royal Society of Medicine*, June, 1931.

WEBER, F. PARKES, M.D. "Congenital Opacity of Both Corneæ with Slight Buphthalmos." *Proceedings of the Royal Society of Medicine*, March, 1931.

——— "Spondylose Rhizomélique (Pierre Marie)." *Proceedings of the Royal Society of Medicine*, March, 1931.

——— "Extreme Xanthelasma Palpebrarum." *Proceedings of the Royal Society of Medicine*, April, 1931.

——— "Splenic Enlargement in Simple Achlorhydric Anæmia." *Proceedings of the Royal Society of Medicine*, May, 1931.

WINNICOTT, D. W., M.R.C.P. "Hæmoptysis: Case for Diagnosis." *Proceedings of the Royal Society of Medicine*, May, 1931.

EXAMINATIONS, ETC.

University of Oxford.

The following Degree has been conferred:

B.M.—Newton, R. D., Scott, R. B.

University of Cambridge.

The following Degrees have been conferred:

M.D.—Hattersley, S. M., Naish, A. E., Prall, S. R., Spence, A. W.

B.Chir.—Barnsley, A., Buckland, H. S., Lane, C. R. T., Orr, R. G.

M.B., B.Chir.—Hutchinson, H. P., Prowse, C. B.

First Examination for Medical Degrees, Easter Term, 1931.

Part I. Chemistry.—Edwards, T. A. W.

Part II. Mechanics.—Edwards, T. A. W., Hewitt, F. E. W.

Part IV. Elementary Biology.—Jones, D. W. G.

Second Examination for Medical Degrees, Easter Term, 1931.

Part II. Human Anatomy and Physiology.—Daniel, T. M., Hutt, C. W., Pirie, A. H.

Third Examination for Medical and Surgical Degrees, Easter Term, 1931.

Part I. Surgery, Midwifery and Gynæcology.—Bradbury, E., Green, H. F., Jameson Evans, L. P., Langford, A. W., More Nisbett, J. G., Partridge, G. T., Sykes, R. A., Waters, A. B., Westwood, M.

Part II. Principles and Practice of Physic, Pathology and Pharmacology.—Buckland, H. S., Hobday, F. T. J., Kersley, G. D., Lane, C. R. T., McGavin, D. B., Orr, R. G., Roberton, H. E. W., Scott, P. G., Stamp, T. C.

University of London.

M.D. Examination, July, 1931.

Branch I. Medicine.—Preiskel, D.

Branch IV. Midwifery and Diseases of Women.—Blount, D. A.

First Examination for Medical Degrees, July, 1931.

Passed.—Armstrong, J. H., Bostock, T. F., Bradley-Watson, J. D., Brentnall, G. C., Clarke, E. P., Fearnley, J. D. O., Fisk, K. H., †Flavell, M. P., Gibson, R. E., Grant, A. H., Johnstone, S. T., Leask, L. R., Lockett, J. M., Lopez-Garcia, L. J., McGladdery, J. P., †‖Ogilvie, J. D., Oliver, W. A., Roberts, J. L. D., Rogers, K. G., Rotter, K. G., Samuel, D. M., Sandell, L. J., Underwood, J. E.

† Awarded a mark for Distinction in Physics.

‖ Awarded a mark for Distinction in Biology.

Second Examination for Medical Degrees, July, 1931.

Part I.—Passed: Bostock, T. F., Braithwaite, R. F., Brown, K. P., Dale, L. F., Dalley, G., Dastur, H. K., Fisk, K. H., Gibson, R. E., Grant, A. H., Harvey, M. W., Jones, S. Avery, Kennedy, A. R., Lavi, S. S., Lockett, J. M., Moynagh, D. W., Mullick, S., Nairac, M. L., Sandell, L. J., Stewart, J. M., Taylor, G. R.

Second Examination for Medical Degrees, July, 1931.

Part II.—Passed: Casson, A. H., Conway-Hughes, J. H. L., Cooke, A. H., Hopkins, J. J. V., MacCarthy, D. de la C., McGladdery, R., Rees, J. H., Soden, G. E. T., Tregaskis, T. G.

Royal College of Surgeons.

The Diploma of *Fellow* has been conferred on the following:

Albuquerque, V. M., Anous, M. A. E., Bowes, R. K., Bridge, K. B., Brittain, H. A., Hamilton, I. A., Isaacs, H. D., Lendon, A. H., Lytle, S. N., Melville, C. B., O'Donnell, J. H., Rennie, B. C., Stevens, T. R., Wilkin, W. J., Willis, B.

The following were successful at the examination held for the *Primary Fellowship:*

Bintcliffe, E. W., Danino, E. A., Harrison, J. O., Kettle, B., Mistri, S. N., Munsif, K. G., Siddiqi, M. A. H.

Conjoint Examination Board.

Pre-Medical Examination, July, 1931.

Chemistry.—Clarke, S. H. C., Heasman, L., Mills, P. J. W., Salmon, J. K.

Physics.—Benson, T. L., Clarke, S. H. C., Heasman, L., Salmon, J. K.

Biology.—Clarke, S. H. C., Mackie, D. M., Owen, W. A.

First Examination.

Anatomy.—Buckland, L. H., Lloyd, G. M., Moynahan, D. J. M., Nel, J. G., Orlek, A., Phipps, G. G., Sansom, H. V.

Physiology.—Appelman, M., Burstal, E. W., Butters, A. G., Cereseto, H. G., Lloyd, G. M., Mankin, E. M., Moynahan, D. J. M., Orlek, A., Sansom, H. V.

Pharmacology and Materia Medica.—Blusger, I. N., Butters, A. G., Epstein, M., Laverick, J. V., Shulman, I. M., Viljoen, D. P.

Final Examination.

The following have completed the Examination for the Diplomas of M.R.C.S., L.R.C.P.:

Bell, W. D., Cook, A. B., Edelsten, G. G. M., Goodhart, C. E. D. H., Green, H. F., Greenberg, A., Jenkyn Thomas, J. E., Keane, C. A., Lloyd, M. A., Petty, G. F., Roberts, J. C., Robertson, H. D., Scott, R. B., Simmons, H., Sykes, R. A., Waters, A. B., Wells, G., Westwood, M.

Royal College of Physicians and Surgeons.

The following Diploma has been conferred:

D.T.M.&H.—Johnson, A. J.

L.M.S.S.A.

The Diploma of the Society has been granted to:
Lokecz, S.

CHANGES OF ADDRESS.

ALEXANDER, G. L., c/o Director of Medical Services, Accra, Gold Coast.

CLARK, W. A., c/o Sarawak Oilfields, Ltd., Miri, Sarawak, *via* Singapore.

DAVIES, C. S., Glynleiros, Neath, Glamorganshire.

GONIN, M. W., Earnley, Bucklesham Road, Ipswich.

HEATH, A., "Lynwood," Sandy Lodge Road, Moor Park, Herts.

NEILL, E. J., Bellevue, Meeching Road, Newhaven, Sussex.

ROTH, E. J. H., 24, Devonshire Street, W. 1.

SPARKS, J. V., 24, Devonshire Street, W. 1.

TOWNSEND, Lt.-Col. R. S., I.M.S., Civil Surgeon, Allahabad, United Provinces, India.

WOOD, P., 1, Russellcroft Road, Welwyn Garden City, Herts.

APPOINTMENT.

JENKINS, C. R., M.R.C.S., L.R.C.P., appointed Medical Officer to Campbell College, Belfast, N. Ireland.

BIRTHS.

BROCKLEHURST.—On September 3rd, 1931, at 7, Rylestone Grove, Stoke Bishop, Bristol, to Sybille (*née* Risk) and Robert J. Brocklehurst—a son.

CLAYRE.—On September 23rd, 1931, at Southampton, to Doris, wife of Dr. John Clayre—a son.

FRANCIS.—On August 22nd, 1931, at Cluaran, Guildford, to Patricia (*née* Stewart), wife of C. A. Francis, M.B., B.Ch., 56, Queen Anne Street, W.—a daughter.

GREEN.—On September 27th, 1931, to Evelyn (*née* Ross), wife of Dr. Ralph Green, of Borough Green, near Sevenoaks—a son.

MACLAY.—On August 9th, 1931, at Johannesburg, to Dr. the Hon. Walter S. Maclay and Mrs. Maclay (Dorothy, *née* Lennox)—a son.

NIXON.—On August 30th, 1931, at 7, Lansdown Place, Clifton, Bristol, to Doreen, wife of Dr. J. A. Nixon—a son.

RIVAZ.—On August 15th, 1931, at Stonefield, Blackheath, to Teresa (*née* Clanchy), wife of Surgeon-Captain P. M. Rivaz—a daughter.

SEPHTON.—On August 20th, 1931, at 4, Rodney Street, Liverpool, to Nancy (*née* Martland), wife of Dr. R. P. Sephton, Lancaster Moor, Lancaster—a daughter.

MARRIAGES.

CAPPS—TORELL.—On Saturday, August 1st, 1931, by Kom. Bengt Aurelius, at Oskarskyrkan, Stockholm, Frederick C. W. Capps, F.R.C.S., to Gertrud Margareta, younger daughter of Disp. and Fru. A. E. Torell, of Linkoping.

EVERETT—HARRIS.—On September 5th, 1931, at St. Bartholomew-the-Great, Smithfield, Alan Doyle Everett, F.R.C.S., son of Mr. and Mrs. H. Everett, of Northam Lodge, Sutton, to Annabel Dorothy Joan, daughter of Mr. and Mrs. G. F. Harris, of 249, St. James' Court, S.W. 1.

EYTON-JONES—TUDOR.—On August 1st, 1931, at Holy Trinity, Paddington, by the father and brother of the bridegroom and Rev. T. Bentham, M.A., uncle of the bride, Frederick M. M. Eyton-Jones, M.D., M.R.C.P., D.P.H., younger son of the Rev. H. M. and Mrs. Eyton-Jones, of Hounslow Heath, to Sally, second daughter of the late Sir Daniel Tudor, K.C., Chief Justice of Gibraltar, and the late Lady Tudor.

FRASER—WINCHESTER.—On September 19th, 1931, Dr. Henry Douglas Forbes Fraser, elder son of the late Forbes Fraser, F.R.C.S., of Bath, to Enid Marcia, only daughter of Dr. and Mrs. Winchester, Ealing, late of Assam.

JENNINGS—DOUGLAS.—On September 19th, 1931, at Holy Trinity Church, Lamorbey, by the Rev. A. O. Scutt, M.A., uncle of the bride, assisted by the Rev. L. T. S. Barrett, Vicar of the Parish, Leslie M. Jennings, M.D., of Reading, elder son of Mr. and Mrs. E. Jennings, of Grimsby, to Margaret Louise, only daughter of Mr. and Mrs. G. P. Douglas, of Otterburn, Sidcup.

KING—ATTERIDGE.—On September 2nd, 1931, at St. Benedict's Church, Ealing, by the Very Rev. Prior, John Francis Lascelles King, M.B., B.S., only son of the late John King and Mrs. King, of 67, Westbourne Park Road, W. 2, to Moira Bridget Atteridge, only daughter of the late John Joseph Atteridge, M.D., and Mrs. Atteridge, of 59, Uxbridge Road, Ealing, W. 5.

OAKLEY—WINGATE-SAUL.—On September 5th, 1931, at St. Mary's, Walthamstow, Wilfrid George, youngest son of Canon and Mrs. Oakley, to Hermione Violet, elder daughter of Lieut.-Col. and Mrs. N. W. Wingate-Saul.

DEATHS.

COHEN.—On September 18th, 1931, while flying, Nigel Benjamin Cohen, dearly beloved elder son of Sir Herbert B. Cohen, Bart., and Lady Cohen, aged 23.

HALES.—On August 20th, 1931, at Holt, Norfolk, Robert Turner Hales, M.D., aged 77.

JAMES.—On September 9th, 1931, at 41, Warwick Road, Upper Clapton, Charles Alfred James, M.R.C.S., L.R.C.P., D.P.H.Eng.

MOUAT-BIGGS.—On July 30th, 1931, of heart failure, at 12, St. Anne's Terrace, Barnes, Major Charles Edward Forbes Mouat-Biggs, M.R.C.S., L.R.C.P., D.T.M., aged 71.

NICOLL.—On September 23rd, 1931, at "Bodicote," Gerrards Cross, Thomas Vere Nicoll, M.R.C.S., L.R.C.P., younger son of the late C. R. Nicoll, M.D., Surgeon-Major, Grenadier Guards, aged 75.

SAMBON.—On August 31st, 1931, suddenly in Paris, Prof. Louis W. Sambon, M.D., of 102, Fordwych Road, London.

TODD.—On September 15th, 1931, at Creech St. Michael, Taunton, Francis Richard Todd, M.B., B.S.(Lond.), aged 44.

WHITEHEAD.—On September 1st, 1931, at the London Hospital, Henry Edward Whitehead, M.R.C.S., L.R.C.P., of 475, Caledonian Road, N. 7, aged 69.

NOTICE.

All Communications, Articles, Letters, Notices, or Books for review should be forwarded, accompanied by the name of the sender, to the Editor, ST. BARTHOLOMEW'S HOSPITAL JOURNAL, *St. Bartholomew's Hospital, E.C. 1.*

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